SEPTEMBER 15, 1955

MODERN

The Journal of Diagnosis and Treatment

MEDICINE



ETIOLOGY OF CEREBRAL PALSY

by Dr. N. J. Eastman

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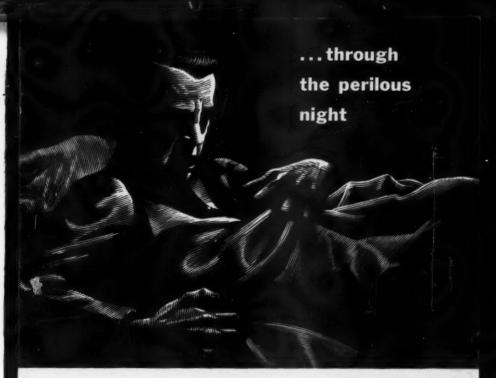
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1. Winsor, T., and Humphreys, P.: Angiology 3:1 (Feb.) 1952. 2. Plotz, M.: New York State J. Med. 52:2012 (Aug. 15) 1952. 3. Dailheu-Geoffroy, P.: L'Ouest-Médical, vol. 3 (July)

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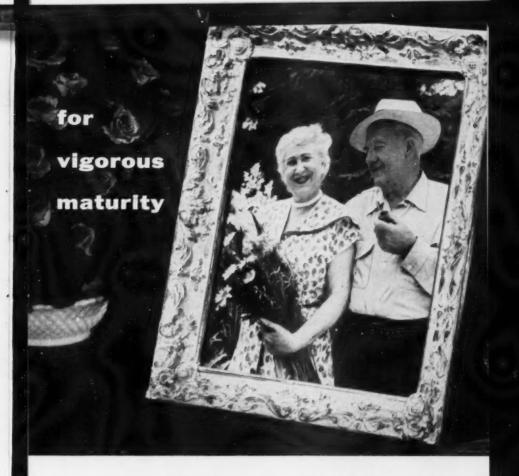
THE MAN ON THE COVER is Dr. Nicholson J. Eastman of Baltimore, Professor of Obstetrics at Johns Hopkins University and Obstetrician-in-Chief at Johns Hopkins Hospital. Dr. Eastman is chairman of the Committee on Maternal Care of the World Health Organization and a member of several medical societies, including the American Association of Obstetricians, Gynecologists and Abdominal Surgeons and the Society for Experimental Biology and Medicine. He is editor-inchief of the Obstetrical and Gynecological Survey and author of Williams Obstetrics and Expectant Motherhood. A report of a recent article by Dr. Eastman, "Etiology of Cerebral Palsy," appears on page 135.



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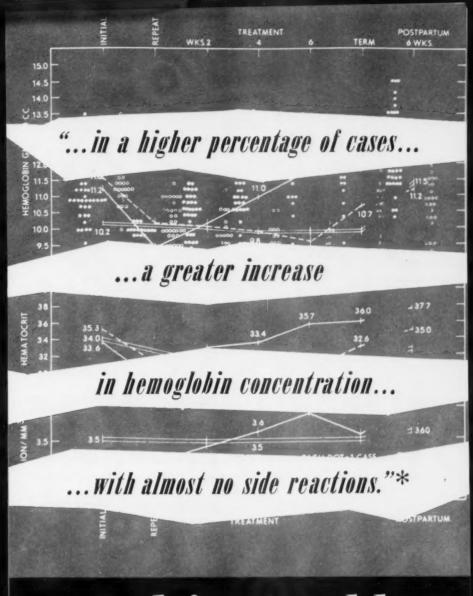
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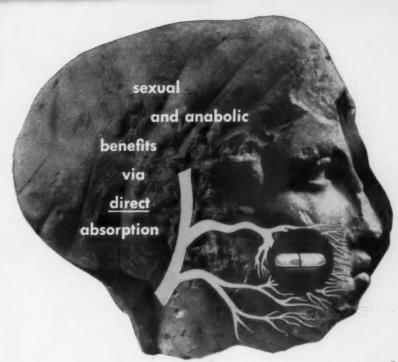
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3. Underwood, G. B., et al.: J.A.M.A., 130:240, 1946.

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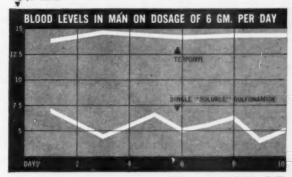
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and perennial author, W. Somerset Maugham.

Mr. Maugham's reverse English on the process of selection points up the obvious. There can be no selection without omission. In this issue of *Modern Medicine*, in the neighborhood of a hundred articles are reviewed at greater or lesser length. These were not the only or the first hundred articles perused by our editorial boards, but they were the choice hundred. To arrive at them, many hundred others had to be passed over. These were skipped for you by not just one but by threescore persons "of tact and discrimination."

To say that the selected articles were the "best" does not imply that the other articles were not good. In some circles, the choice of the "best" would be different. But the criteria applied by the members of *Modern Medicine's* editorial boards are the interest and the usefulness of the article to the general practitioner.

The Editors encourage you to read widely, but if you cannot find the time to do all the reading you would like to do, you can be assured that the skipping has been wisely done and that regular reading of *Modern Medicine* will keep you up-to-date with clinical medicine.

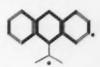
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mental and emotional disturbances
alcoholism
hospitalized psychiatric patients
severe pain
obstetrics and surgery
behavior disorders in children
intractable hiccups
status asthmaticus
neurodermatitis and severe itching
drug-addiction withdrawal
symptoms

"Thorazine' Hydrochloride is available in: 10 mg., 25 mg., 50 mg. and 100 mg. tablets; 25 mg. (1 cc.) and 50 mg. (2 cc.) ampuls; and syrup (10 mg./5 cc.).



Smith, Kline & French Laboratories, Philadelphia 1

*T.M. Reg. U.S. Pat. Off. for S.K.F.'s brand of chlorpromazine.



FOR INDIVIDUALIZED CONTROL OF TENSIONS

Tensions are not continuous. They occur in peaks, arising from valleys of relative relaxation. With this in mind, Nidar was formulated for the individual patient.

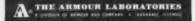
When Nidar is taken in the morning and again in the early afternoon, the patient is neither jittery nor dopey. He is relaxed, able to meet situations calmly and alertly.

Each light green, scored Nidar tablet contains:

Secobarbital Sodium 3/8	
Pentobarbital Sodium 3/8	gr.
Butabarbital Sodium 1/8	gr.
Phenobarbital	gr.

Bottles of 100 and 1000.

NOTE: Nidar is also an excellent hypnotic.



Correspondence

Communications from the readers of Modern Medicine are always welcome. Address communications to The Editors, Modern Medicine, 84 South 10th St., Minneapolis 3, Minn.

Gastric Analysis Is Useful

TO THE EDITORS: An editorial by Dr. Walter C. Alvarez (Modern Medicine, July 1, 1955, p. 75), stated that gastric acidity determinations are of little value and might as well be discontinued. At the University of Minnesota, we have found the opposite relationship of this important laboratory determination to modern practice and wish to direct attention to significant studies reported during the past few years indicating the usefulness of gastric analysis in the over-all program of combating gastric cancer.

In 1948, Hebbel and Gaviser reported an incidence of 65% achlorhydria and 20% severe hypochlorhydria in patients with gastric cancer who were seen at the University of Minnesota. This relationship has recently been reevaluated in a study of 1,152 gastric cancer patients at the University of Minnesota, wherein 72% had histamine-fast achlorhydria and 15% had free hydrochloric acid values below 20 degrees of free acid.

Berkson, Walters, Gray, and Priestley reported in the *Proceedings of the Staff Meetings of the Mayo Clinic* in 1952 that a high correlation existed between the gastric anacidity and gastric cancer in their institution. They further em-

FOR

PROFOUND

VASODILATING EFFECT

IN ACUTE

VASOSPASTIC

CONDITIONS

ILIDAR ROCHE

increases
peripheral
circulation and
relieves vasospasm
by (1) direct
vasodilation, and
(2) adrenergic blockade.
Provides relief from aching,
numbness, tingling, and
blanching of the extremities.
Exceptionally well tolerated.

FOR

PROLONGED

VASODILATION

IN CHRONIC

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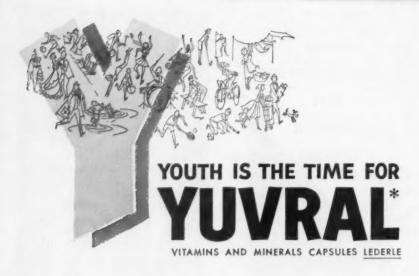
RONIACOL 'ROCHE'

acts primarily
on the small
arteries and
arterioles to augment
collateral circulation.
Especially useful for long-term
therapy in older
patients whose feet are
"always cold".

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ILIDAR -BRAND OF AZAPETINE

BONIACOL - BRAND OF BETA-PYRIDYL CARBINOL



For the big and important age group between pediatrics and geriatrics, Lederle offers Yuvral Capsules, a new diet supplement. A highly potent formula including 11 vitamins, 12 minerals, and Purified Intrinsic Factor Concentrate—all in a dry-filled, soft-gelatin capsule with no unpleasant aftertaste.

Among adolescents and young adults, there are many "nutritionally starved" persons: those with strong dislikes for certain foods, those who won't drink milk, young women on self-prescribed diets. Just one Yuvral Capsule daily assures them of an adequate supply of essential vitamins and minerals.

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Vitamin A 5000 U.S.	P. Unit
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Vitamin B ₁₂	megm
Thiamine Mononitrate (Bi)	3 mg
Riboflavin (B2)	3 mg
Niacinamide	20 mg
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Pyridoxine HCl (B ₀)	0.5 mg
Ca Pantothenate	1 mg
Ascorbic Acid (C)	50 mg
Vitamin E (as tocopheryl acetates)	5 I. U
Iron (as FeSO ₄)	15 mg

Iodine (as KI)	0.15	mo et
	0.10	Hill.
Boron (as Na ₂ B ₄ O ₇ • 10H ₂ O)	0.1	mg.
Copper (as CuO)	. 1	mg.
Fluorine (as CaF2)	0.1	mg.
Purified Intrinsic Factor Concentrate	0.5	mg.
Magnesium (as MgO)	1	mg.
Manganese (as MnO2)	. 1	mg.
Potassium (as K28O4)	. 5	mg.
Zine (as ZnO)	0.5	mg.
Calcium (an CaHPO ₄)	69	mg.
Phosphorus (as CaHPO ₄)	53.8	mg.
Dibasic Calcium Phosphate	236	mg.
Molybdenum (as Na ₂ MoO ₄ • 2H ₂ O)	0.2	mg.
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AMERICAN GUARAMI COMPANY PERTI RIVER, New York



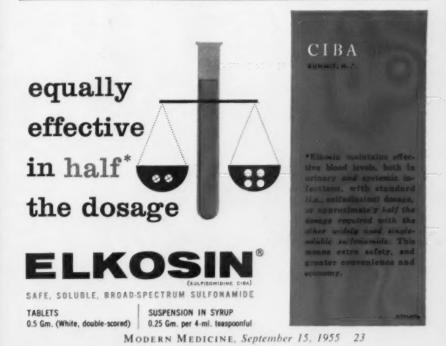
phasized a significant decrease in the survival rate of the patients when they were selected in groups with decreasing free hydrochloric acid down to a state of total achlorhydria: "... the patients who underwent resection were subdivided into six classes according to the value of the free acidity at the time of operation. There is a remarkably regular correlation between acidity and survival; the lower the gastric acidity, the poorer the outlook in respect to longevity."

In the same issue of the *Proceedings of the Staff Meetings of the Mayo Clinic*, Mandred Comfort estimated that about 7 million to 9 million persons over the age of 40 years had anacidity of significant degree and that the incidence of gastric

cancer in this group is approximately 8 times greater than in the general population of the country. He emphasized that approximately 50% of all gastric cancers should develop in this group of people. Dr. Comfort proposed at that time that each physician might operate a screening program among his own patients, choosing those with low gastric secretory activity for more careful periodic scrutiny.

We would readily concede that a decision regarding the final benign or malignant character of a lesion of the stomach cannot be made on the presence or absence of gastric acidity. However, the combination of gastric ulceration and achlorhydria increases the likeli-

(Continued on page 26)



TO TEMPER
TENSION



OF CARDIOVASCULAR-NERVOUS STATES

Butiserpine*

New Butiserpine is a timely approach to treatment of the many conditions where cardiovascular and nervous tension may be concurrent.

Butiserpine includes the outstanding, complementary drugs:

RESERPINE (0.1 mg.)

relieves tension and produces a moderate hypotensive effect.

BUTISOL® SODIUM (15 mg.)

acts on the higher cortical centers to produce mild "intermediate" sedation. May be administered over prolonged periods without hazard of accumulation associated with other barbiturates such as phenobarbital.

BUTISERPINE will be found most useful in:

Mild to moderate hypertension; coronary occlusion; angina pectoris, congestive heart failure; anxiety and tension states and for the premenstrual and menopausal syndromes. May be used in conjunction with more potent hypotensive agents when indicated.

Tablets Butiserpine, bottles of 100 and 1000.

1. Butler T. C.; Mahaffee, C., and Waddelf, W. J.; Phenobarbital Studies of Elimination, Accumulation, Tolerance, and Dosage Schedules, J. Pharmacol. & Exper. Therap. 111.425 (Aug.) 1954.



LABORATORIES, INC.
PHILADELPHIA 32, PA.

CORRESPONDENCE

hood of the malignancy of the gastric lesion manyfold. It is indeed true that only rarely can a gastric analysis be depended upon for a diagnosis, as stated by Dr. Alvarez. But one might well ask, how many laboratory procedures do establish a definite diagnosis in and of themselves? The clinical complex of the disease in question is the milieu against which any laboratory procedure must be evaluated and the relationship wherein it has real value.

At the University Hospitals, gastric analyses are performed on fasting stomachs using 3 doses of 0.5 mg. histamine phosphate as secretory stimulant given at thirty-minute intervals. Standard Toepfer's titration determinations are made

and reported as degrees of free acidity and total acidity. Hypochlorhydria has been empirically set at less than 20 degrees of free hydrochloric acid.

Recent reports from the Cancer Detection Center at the University of Minnesota demonstrate a 7.1 times greater chance for the development of gastric cancer in persons over 40 years of age with achlorhydria or hypochlorhydria as compared with normal persons of the same age. This figure, obtained after seven years of actual clinical trial on a group of 7,500 people, is remarkably consistent with the hypothetical figure of Dr. Comfort's-namely, 8 times the expected rate. Combining the studies made in the Cancer Detection Center

free from premenstrual tension

Now she can smile and be gay on every day

She can hardly believe that she's the same person who used to be a jumble of conflicting emotions, uncontrolled temper, hypersensitive attitudes, and peevish disposition for many dismal days each month.

With M-Minus 5 the characteristic emotional impact of the premenstrual tension syndrome can be averted in 82% of cases,¹

1. Vainder, M.: Indus. Med. & Surg., 22:183, 1953

Each tablet contains:
Pamabrom 50 mg.
Acetophenetidin 100 mg.

M-Minus 5

Premenstrual Divretic and Analgesic for Treatment of Premenstrual Tension and Dysmenorrhea

Whittier LABORATORIES, 919 N. Michigan Ave., Chicago 11,





a new Robins' Extentab for

"all-day" or "all-night"

SEDATIVE THERAPY

on single tablet dosage.

Phenobarbital—the sedative par excellence—is now available in the unique Robins' Extentabe dosage form, as 'Stental Extentabe'.

Each Stental Extentab contains % gr. phenobarbital, one-third of which is released promptly on ingestion, and the balance gradually and evenly, to provide smooth, sustained sedation over a period of 10 to 12 hours...thus avoiding repeated decage during the day, or awakening at night for additional medication.



STENTAL EXTENTABS

(Phenobarbital Extended Action Tablets)

A. H. ROBINS CO., INC. - Richmond 20, Virginia Ethical Pharmaceuticals of Marit sinco 1878



with the gastric cancer precursor study, we see that 39 gastric cancers have been found in a group of 3,516 people studied over a nine-and-one-half-year period. Of 53% who had no symptoms whatsoever of gastric cancer at the time of diagnosis, 52% are living and well up to seven years. Of the 47% with symptoms before the time of diagnosis, only 16% are alive up to six years after the therapy. The only known mechanism indicating the need for repeated gastric roentgenographic examinations in this group of 53% with no symptoms is achlorhydria or hypochlorhydria. It is important to remember that over two-thirds of these people had 3 or more roentgen examinations before the diagnosis was established.

In confirmation of the data of Berkson and others, our recent report indicates: [1] a 4.5 times greater chance for gastric cancer in the achlorhydric group; [2] a 3.4 times greater chance for gastric cancer in the hypochlorhydric group; and [3] a 25.2 times greater chance for gastric cancer in the pernicious anemia group.

It is regrettable that a roadblock should be thrown up against the only reasonable and scientifically proved method of facilitating the early, asymptomatic diagnosis of gastric cancer which permits the establishment of treatment in the earliest stage of the disease. Our experience definitely suggests that gastric analysis is very much worth

(Continued on page 32)

1950 Cortone®

1952 Hydrocortone®

1954 'Alflorone'

1955 'Hydeltra'

DELTRA® tablets

(Prednisone, Merck)

2.5 mg. - 5 mg. (scored)

the delta, analogue of cortisone

Indications:



Philadelphia 1, Pa. Division of Merck & Co., Inc. Rheumatoid arthritis Bronchial asthma Inflammatory skin conditions

28 MODERN MEDICINE, September 15, 1955

PROMPT RELIEF

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Prowers

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Increasingly lavored as evidenced in-

AQUEOUS EPINEP

RECENT CLINICAL REPORTS

During the past few years we have had considerable experience with, and have been favorably impressed by, the action of an aqueous suspension of epinephrine, Sus-Phrine 1:200 (Brewer). This material has a decided advantage over epinephrine suspended in oil. There is no difficulty with this material in obtaining an even suspension with a few shakes of the ampule even if it has been standing for a considerable time. The aqueous suspension flows freely through an ordinary hypodermic needle. Another advantage is that 20 per cent of the amount injected is available for immediate bronchodilator effect. The balance is gradually liberated for sustained action. We have given doses of 0.1 to 0.25 cc. (1½ to 4 minims) to children, with excellent immediate as well as prolonged effect.

Levin, S. J. Ped. Cl. of N. A. 1:975,1954.

Epinephrine suspended in oil has the disadvantages that because of delayed action it cannot be used when prompt effect is desired as in acute asthmatic attack, and it must be given intramuscularly making self-administration difficult. Aqueous suspensions have a prompt, as well as a prolonged action, and may be self-administered subcutaneously as readily as epinephrine hydrochlaride solution.

Naterman, H. L. The Journ. of Allergy, 24 60 1953.

... In 173 patients... all but three stated emphatically that they prefer the new product (Sus-Phrine) to epinephrine in oil ... Greatest individual acceptances of the new injection has been by children.

Unger, A. H. and Unger, L. Annals of Allergy. 10:128,1952.

Brewer EST, 1852

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BREWER & COMPANY, INC. WORCESTER 8, MASSACHUSETTS U.S.A.



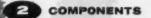
Favored by students at 65 of the 74 U.S. medical schools

In most medical schools, students are required to purchase their own otoscope-ophthalmoscope diagnostic sets. In 1954, Welch Allyn instruments were purchased by a great majority of students at 65 out of the 74 U. S. medical colleges and at 9 out of the 11 Canadian medical colleges.

Since Welch Allyn sets cost somewhat more than competitive brands, it seems obvious that this choice was made on a basis of quality alone. We believe that you who are established in the profession of medicine will be glad to know that our young doctors are starting right, with instruments that will provide accurate diagnosis with minimum effort, plus assurance of long and trouble-free instrument life.



ELECTRICALLY ILLUMINATED DIAGNOSTIC INSTRUMENTS



2 COMPLEMENTARY ACTIONS

WAY CONTROL

- In urinary tract infections -

NOW . . . both pain and infection
are brought under quick, safe
control at their source by the
speedy, dual-action of the
component drugs in—

RELIEVES LOCAL PAIN BY LOCAL ACTION

Phenylazo-diamino-pyridine HC1—enjoys a long clinical history as a local (not unwanted systemic) analgesic to the urogenital mucosa. Relief from burning, pain frequency—in minutes in 90 per cent of cases.

REMOVES LOCAL INFECTION BY LOCAL ACTION

Sulfacetamide—sulfonamide of choice in urinary tract infections—unusually high solubility in acid urine so prevalent in pathological infections—hence (1) effective in 93-98 per cent of cases involving mixed organisms, and (2) safe—no kidney damage, no renal concretions, no anuria.

INDICATIONS:

cystitis, pyelitis, urethritis (nonspecific), prostatitis, pain and infection associated with kidney stones, urinary prophylaxis during pregnancy and gynecologic surgery.

SUPPLIED

SULFID TABLETS - each coated tablet contains: Phenylazodiamino-pyridine HC1, 50 mg.; Sulfacetamide, 250 mg. Bottles of 100.

SULFID SUSPENSION

(Genatric-Pediatric)—each teaspoonful (5 cc.) contains one-half the Sulfid tablet dosage.

COLUMBUS

PHARMACAL COMPANY - Columbus 16, Ohio

Literature & bibliography on request.

*A Columbus Original - Introduced July, 1954,

doing. It would be unfortunate, indeed, if the reading of the editorial should persuade anyone not to avail himself of this important diagnostic aid.

CLAUDE R. HITCHCOCK, M.D. Minneapolis

¶ Dr. Alvarez' comments follow:

In writing as I did, I was not going off half-cocked. Fifty years ago, as an intern, I started making a gastric analysis of every patient complaining of indigestion or abdominal pain. In those days, I could not just order an analysis; I had to pass the tube and make the titration myself.

Soon I discovered that in making these analyses I was wasting much of my time; and this was bad, because I had a big and heavy service. In most cases, I found that the patient had a free acidity of somewhere between 20 and 40 units, and this did not help me to make any diagnosis. In the cases of many elderly persons, I found little acid, but that did not help much because I could not order an abdominal exploration on the strength of it. Of every 5 normal old persons, 1 has no free hydrochloric acid. In my intern days, of course, there were no roentgenologists to help me.

Occasionally, I found a decided hyperacidity which suggested a duodenal ulcer, but naturally it did not prove its presence. I have always had a free acidity of over 80 units without an ulcer.

(Continued on page 291)

to prevent and treat

BEDSORES

and provide added patient comfort

Ample clinical evidence indicates the value of Alternating Pressure Point Pads in the prevention and treatment of decubitus ulcers.

With the aid of APP pads it has been found possible to keep the skin healthy with one-half the nursing care usually needed.

Paralyzed, comatose and severely debilitated patients are candidates for the pads, as are patients to whom routine turning is painful, or those in continuous traction or casts.

The Alternating Pressure Point Pad is a pneumatic pad placed over the mattress. It has parallel air cells. Alternate cells are inflated and deflated every four minutes by a quiet electric pump. Body pressure is thus distributed and allows normal blood circulation.

Available from your hospital supply dealer. Many of these dealers offer a rental-purchase plan on APP units. Or write to:

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VI-MIX DROPS

(MULTIPLE VITAMIN DROPS, LILLY)



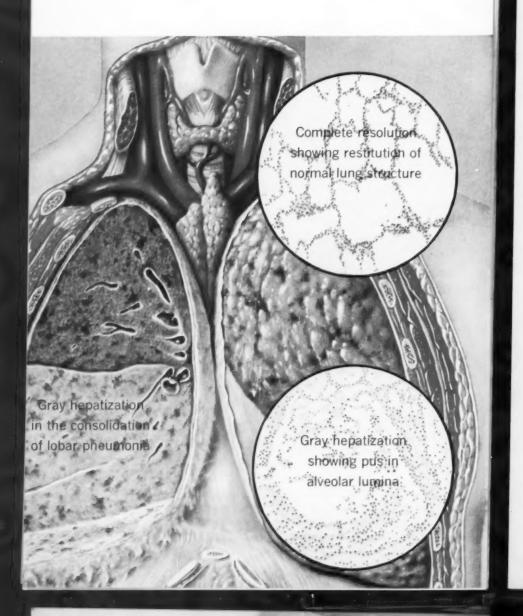
the most potent formula of its kind

The unique dual packaging of 'Vi-Mix Drops' protects the potency of moisture-labile vitamins and allows for an exceptionally high vitamin B₁₂ and C content. Pharmacist or mother simply adds the liquid of one bottle to the powder contained in the other. Eli Lilly and Company, Indianapolis 6, Indiana.

A DISTINGUISHED MEMBER OF THE Lilly FAMILY OF VITAMINS

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Most useful antibiotic for the most prevalent infections..



.. ILOTYCIN

(ERYTHROMYCIN, LILLY)

Over 90% of all bacterial infections of the chest are caused by organisms highly sensitive to 'Ilotycin.'

Fully as effective against pneumococci as any other antibiotic.

In pneumococcus pneumonia, fever and acute symptoms subside within forty-eight hours. The pneumococcus-killing action of 'Ilotycin' is especially valuable in elderly patients and in debilitated states.

More effective against streptococci than the tetracyclines.

'Ilotycin' is bactericidal. The great majority of originally positive throat cultures become negative within twenty-four hours. Thus the possibility of complications is minimized.

The most effective antibiotic against staphylococci.

More than 90% of all staphylococci encountered in private practice are highly sensitive to 'Ilotycin'—more than to any other antibiotic.

Safe and well tolerated.

Staphylococcus enteritis and avitaminosis have not been encountered.

Dosage in pneumonia: 1.2 to 2 Gm. orally per day, in divided doses. Continue for a minimum of fourteen days. Children, 5 mg. per pound of body weight q. 6 h.

Available in tablets, pediatric suspensions, drops, and I.V. ampoules.

ELI LILLY AND COMPANY . INDIANAPOLIS 6, INDIANA, U.S.A.

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here's a good long lift when a lift is needed...

the VEII psycho-normalizer

AMBAR ESTENTABS

Ambar Extentabs and Tablets contain, in intermediate dosage, the potent CNS stimulant, methamphetamine plus phenobarbital. Combined in an optimal ratio of 6.5 parts phenobarbital to 1 part methamphetamine, methamphetamine's potent stimulating influence is firmly controlled, resulting in a gentle, "jolt-free" normalization of depressed moods and excessive appetite.

normalize the deposit of mond.

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Ambar Extentabs work a 12-hour day

without time
off for
getting started

without time
out for
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Each Extentab is equivalent to 3 full doses in one tablet. Dose number one, present in the tablet coating, is released quickly yet smoothly. Needed clinical effect is promptly achieved.

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Average discretion of therapeutic effects 10-12 hours.

Ambar Tablets

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Ambar Tablets

Methamphetamine hydrachlorida

3.33 mg
Phenobarbital (1/3 gr.)

Average distribute of therapeutic effects 6 hours.

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in rheumatoid arthritis now available...the second new Schering corticosteroid METICORTE/IOne

over cortisone and hydrocortisone

possesses an augmented 1

Questions & Answers

All questions received will be answered by letter directed to the petitioner; questions chosen for publication will appear with the physician's name deleted. Address all inquiries to the Editorial Department, MODERN MEDICINE, 84 South Tenth Street, Minneapolis 3, Minnesota.

Industrial Oxygen

QUESTION: A patient has been inhaling industrial oxygen for chronic bronchiectasis. Does industrial oxygen differ from that used in medical practice?

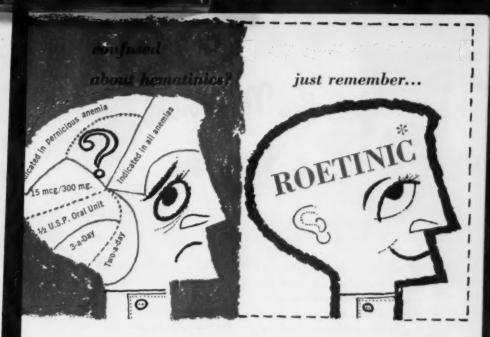
M.D., Pennsylvania

ANSWER: By Consultant in Anesthesiology. To my knowledge, gas supply houses fill both industrial and medical gas tanks from a single source of supply. Medical oxygen tanks are probably inspected more frequently and given greater care.

Stellate Ganglion Block

QUESTION: What is the status of stellate ganglion block in angina pectoris and myocardial infarction? M.D., Maine

ANSWER: By Consultant in Anesthesiology. Right or left stellate ganglion block is most frequently used in treating the shoulder-hand syndrome, which may be a complication of angina pectoris or myocardial infarction. Stellate ganglion blocks have been used to relieve the pain of angina pectoris and to determine prognosis of the disease.



Each ROETINIC capsule contains:

Intrinsic Factor-Vitamin B₁₂
Concentrate . . . 1 U.S.P. Oral Unit
Folic Acid 2 mg.
Ferrous Sulfate, Exsiccated . . 400 mg.
Ascorbic Acid (C) 100 mg.
Molybdenum Oxide (as the Trioxide) . 1.5 mg.
Cobalt (as the Gluconate) . . 0.5 mg.
Copper (as the Gluconate) . . 0.5 mg.
Manganese (as the Gluconate) . . 0.5 mg.
Zinc (as the Gluconate) . . . 0.5 mg.
Supplied: Bottles of 30 and 100 soft, soluble capsules. On your prescription only.

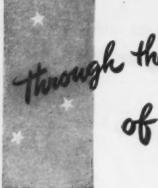
one dosage:

One capsule daily for all treatable anemias...

one name: ROETINIC

The most potent hematinic your patient can need





rough the Menstrual Years of Life...



"HE frequency with which the menstrual life of so many women is marred by functional aberrations that pass the borderline of physiologic limits, emphasizes the importance of an effective uterine tonic and regulator in the practicing physician's armamentarium.

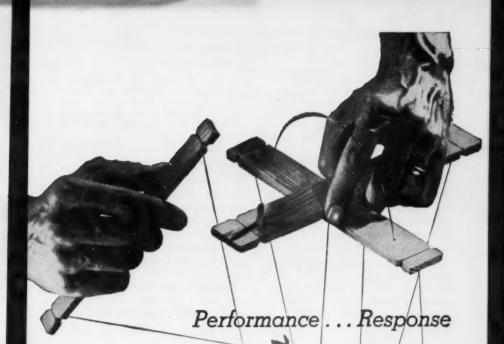
In ERGOAPIOL (Smith) with SAVIN the action of all the alkaloids of ergot (prepared by hydro-alcoholic extraction) is synergistically enhanced by the presence of apiol

and oil of savin. Its sustained tonic action on the uterus provides welcome relief by helping to induce local hyperemia, stimulating smooth, rhythmic uterine contractions and serving as a potent hemostatic agent to control excessive bleeding.

May we send you a copy of the booklet "Menstrual Disorders", available with our compliments to physicians on request.

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Salcort performance stimulates a dependable response in arthritic conditions; early functional improvement and a sense of well being are significant. Smaller doses of salicylates and cortisone combined produce a therapeutic response equivalent to that of large doses of cortisone . . . side reactions are eliminated and continuous therapy is permitted. Salcort presents no withdrawal problems.

Each tablet contains:		
Cortisone Acetate	2.5	mg.
Sodium Salicylate	0.3	Gm.
Aluminum Hydroxide Gel, dried	0.12	Gm.
Calcium Ascorbate	60	mg.
(equivalent to 50 mg. Ascorbic Acid)		
Calcium Carbonate	60	-

professional literature and sample available on request

THE S. E. MASSENGILL CO. BRISTOL, TENN.



Mammary Discharge

QUESTION: A 35-year-old woman who had one miscarriage has a grayishgreen discharge from both breasts. The fluid is expressed easily with slight pressure. No masses were palpable by examination. What is the etiology and treatment?

M.D., Michigan

ANSWER: By Consultant in Gynecology. This may be the colostrum that occurs with pregnancy and persists for a time afterward. Colostrum sometimes remains for many weeks but eventually disappears.

Occasionally, very small adenomas in the duct will bleed. This discharge may be bright red or black; a small amount could be green. However, the discharge is unilateral with adenoma.

Respiratory Allergy

QUESTION: A patient who is apparently allergic to the dust and fumes from a nearby refinery has been hoarse and has a sore throat intermittently. How can this allergy be relieved?

M.D., Texas

ANSWER: By Consultant in Allergy. Irritation of the upper respiratory tract may occur in individuals who are sensitive to dust or other inhalants. The best therapy is reduction of the sensitivity to the specific allergens, which raises the threshold for adaptation to contaminants in the air. However, a change in environment is necessary for a number of individuals before relief from the allergy is obtained.

FOR A GOOD NIGHT'S SLEEP



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WITHOUT BARBITURATE HANGOVER

For hypnosis: 2-grain capsules / For daytime sedation: 1-grain capsules



for day-long relief of anxiety and depression in:

Premenstrual tension Menopausal depression Chronic headache and backache Bronchial asthma Abdominal spasm Alcoholism Convalescence Arthritis Weakness and vertigo Pain or inactivity of chronic disease Obesity



When anxiety, apprehension and depression cause or complicate the condition you are called upon to manage, you will find 'Dexamyl' unusually valuable.

A single Dexamyl* Spansule capsule provides smooth, uninterrupted, day-long relief of the mental and emotional distress you see in almost every patient. No. 1 & No. 2 dots

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brand of sustained release capsules

In two strengths (the duration of effect is the same; the difference is in the intensity of effect):

Psychogenic fatigue

No. 1: Each capsule contains Dexedrine* Sulfate (dextro-amphetamine sulfate, S.K.F.), 10 mg.; amobarbital, 1 gr. No. 2: Each capsule contains 'Dexedrine' Sulfate, 15 mg.; amobarbital, 1½ gr.

Smith, Kline & French Laboratories Philadelphia

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how
bioflavonoids
with ascorbic acid
help in
threatened and
habitual abortion...

Frequent nosebleeds, gum bleeding and easy bruising were observed in a high percentage of women who had repeated abortions, according to one study.1

Another investigator² reported abnormal capillary fragility in 80% of habitual aborters.

C.V.P. helps to diminish abnormal capillary permeability and fragility by acting to maintain the integrity of the "cement" substance of capillary walls. Thus, C.V.P. may be a helpful adjunct in the management of threatened and habitual abortion.

C.V.P. provides the capillary-protectant factors of whole citrus bioflavonoid compound (sometimes referred to as "vitamin P complex"), combined with ascorbic acid.
C.V.P. is water-soluble and believed to be more readily absorbed than relatively insoluble rutin.



Each C.V.P. capsule or teaspoonful (5 cc.) of syrup provides:

Citrus Flavonoid Compound . . 100 mg. Ascorbic Acid (vitamin C) . . . 100 mg.

rationale: The correction of abnormal capillary fragility in habitual aborters supposedly "decreases the possibility of retroplacental hemorrhage, or possibly enhances the efficacy of established therapeutic regimens by modifying capillary permeability and vascular disturbances throughout the body, whether they be in the skin, liver or the placenta."²

Bottles of 50, 100, 500 and 1000 capsules; 4 oz., 16 oz. and gallon syrup.

- 1. Science News Letter, March 1954
- 2. Greenblatt, R. B.: Obstet. & Gyn. 2:530, 1953

samples and literature from U.S. vitamin corporation

(Arlington-Funk Laboratories, division) 250 East 43rd Street, New York 17, N.Y.

Reaction to Penicillin

QUESTION: A patient died in a doctor's office shortly after receiving an injection of penicillin. Is such a fatal reaction rare? Does this occur after the first injection or only after several doses?

M.D., West Virginia

ANSWER: By Consultant in Allergy. Fatal anaphylactic reaction to penicillin is not unusual. Fatal reactions may result from the first injection of penicillin or may occur after several doses.

Skin testing the patient before injection of penicillin may be of some value if the test is definitely positive. Administration of an antihistamine or epinephrine 1:1,000 with the penicillin may prevent a fatal reaction.

Induction of Labor

QUESTION: Many obstetricians commonly induce labor. Is this good practice? Can feeling of the cervix determine whether a patient is at

M.D., Tennessee

ANSWER: By Consultant in Obstetrics. Induction of labor is becoming more common. The principal reason for this is convenience of the patient or doctor. If the patient is carefully selected, the procedure is not hazardous to either mother or child. However, labor should not be induced, except for a specific indication such as toxemia, unless the cervix is soft and partly effaced. The condition of the cervix can be easily determined by vaginal examination.



in varicose vein complications...

striking relief

MY-B-DEN

(adenosine-5-monophosphate)



ulcers begin to heal pain and burning disappear pruritus subsides edema, erythema and tenderness decrease

Full information and bibliography on request

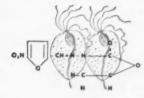




Now...a new and <u>specific</u> drug for trichomonal vaginitis...



...contains Furoxone® (brand of furazolidone), an antimicrobial nitrofuran specific against trichomonal vaginitis. More than 300 nitrofurans were screened before discovery of this potent new trichomonacide.



- rapid relief of symptoms—usually in 2 or 3 days
- · cures in 1 menstrual cycle
- low incidence of recurrence as proved by repeated microscopic examinations
- bactericidal against a wide range of grampositive and gram-negative organisms.

Tricofuron Vaginal Suppositories contain Furoxone 0.25% in a water-miscible base. Box of 12.

Tricofuron Vaginal Powder contains Furoxone 0.1% in a water-soluble powder base composed of lactose, dextrose and citric acid. Bottle of 30 Gm.

Both dosage forms are used concomitantly in treatment.

A full product report and patient instruction folders available on request.







Supplied in boules of 2 or 6 fluidounces.

Desage is I tempornful two or three times daily; two or three times this amount for polassium therapy.

VALENTINE Company, Inc.

Forensic Medicine

ARTHUR L. H. STREET, LL.B.

Prepared especially for Modern Medicine

Opinion-Cause of Death

PROBLEM: An expert witness is not permitted to give an opinion on the ultimate question to be decided by the jury. When a landlord was sued for compulsory removal of a woman with typhoid fever, could a medical expert testify that her death was caused by the eviction?

COURT'S ANSWER: Yes.

The North Carolina Supreme Court decided that the jury's function was not invaded (83 S.E. 613).

Adenoma-Cause

PROBLEM: A claimant believed that an adenoma of the prostate gland was caused by a fall. He related that he had had no trouble with the gland previously, but that after the fall, urination became painful and, occasionally, he passed blood. Was this sufficient to overrule medical testimony that the fall could not have injured the gland and that the adenoma must have been caused by long-standing disease?

COURT'S ANSWER: No.

The Texas Court of Civil Appeals, San Antonio, said that lay testimony regarding the etiology of an ailment must be more than mere conjecture to overrule medical testimony (278 S.W. 2d 892).

the Resions

...specifics in diarrhea The RESIONS offer two effective compounds for treatment of almost any diarrheal condition found in clinical practice.

The Resions act by ion exchange . . . to attract, bind and remove toxic materials in diarrheas caused by food or bacterial toxins, by prolonged use of certain drugs, and in general infectious diseases.

The RESIONS are safe because they are totally insoluble and non-toxic.

RESION therapy will control about 90% of common diarrheas.

RESION P.M.S is intended specifically for rapid control of those rare diarrheas caused by Gram-negative organisms; to prevent secondary bacterial infection; in mycotic diarrhea following the use of the broad-spectrum antibiotics, and to inhibit the enteric growth of *C. albicans* (Monilia).

Region

time-tested, adsorbent effectiveness

Polyamine methylene resin	.10%
Sodium aluminum silicate	
Magnesium aluminum silicate	



CONGO MAGIC (Dysentery Fetish)

RESION therapy now works scientific magic against diarrhea.

Region P-M-S

A new formula providing antibacterials to combat bacillary and fungal vectors



Each 15 cc. contains the RESION formula plus:

Polymyxin-B sulphate	125	,000 L	inits
Phthalylsulfacetamide			
Para hydroxybenzoic acid esters.		0.235	Gm.

THE NATIONAL DRUG COMPANY Philadelphia 44, Pa.

Dosage: Resion—1 tablespoonful hourly for 4 doses; then every 3 hours while awake. Resion P-M-S—1 tablespoonful hourly for 3 doses; then 3 times daily.

Supplied: RESION, in bottles of 4 and 12 fluid ounces. RESION P-M-S, bottles of 4 fl.oz.

"an alliance of the classic and contemporary"...





FOR HYPERTENSION



Now you can give your
hypertension patients the compound
therapeutic advantages of two
most successful hypotensive agents:



(theobromine and Luminal®)

plus
the widely recommended
Rauwolfia serpentina alkaloids.



Synergistic Therapy New THEOMINAL R. S.

(Theominal with Rauwolfia serpentina)

BETTER CONTROL OF CARDIOVASCULAR AND SUBJECTIVE SYMPTOMS

Theominal R. S. combines the vasodilator and myocardial stimulant actions of theobromine and Luminal with the moderate central hypotensive effect of Rauwolfia serpentina. Gentle sedation calms the patient and a feeling of "relaxed well being" is established. Headache and vertigo disappear as the blood pressure and pulse rate are reduced gradually.

GOOD TOLERANCE

Minor side effects — nasal stuffiness, drowsiness, etc. — may occur in isolated instances. No serious side effects have been reported.

Each Theominal R.S. tablet contains:

- Theobromine 0.32 Gm.
- Luminal 10 mg.
- Purified Rauwolfia serpentina
 alkaloids (alseroxylon fraction) 1.5 mg.

Dose: One tablet 2 or 3 times daily.

Theominal R. S. is supplied in bottles of 100 and 500 tablets.



Theominal and Luminal (brand of phenobarbital), trademarks reg. U.S. Pat. Off.

FORENSIC MEDICINE

Compensation—Neurosis

PROBLEM: Claimant and another workman were on a scaffold that collapsed 8 stories above ground. Claimant was injured only slightly but saw his companion killed by the fall. Was neurosis of the claimant, caused by fright, compensable under the Texas workmen's compensation act on a theory of injury to the physical structure of his body?

COURT'S ANSWER: Yes.

The Texas Supreme Court reasoned that physical structure of the body refers to function of the entire body and not simply to the skeletal structure, circulatory system, or digestive system. A medical witness stated that the severe psychic trauma injured the worker so that he did not function properly.

The Court quoted an observation by the Louisiana Court of Appeal to the effect that though an accident may not produce anatomic pathology, it may cause disability as a result of hysteria (279 S.W. 2d 315).

Insurance—Cause of Death

PROBLEM: The proof of loss made by the beneficiary of an accident policy included the coroner's certificate that insured died of coronary thrombosis. Did that exonerate the insurer from liability in the absence of proof of accidental death?

COURT'S ANSWER: Yes.

So decided the Missouri Court of Appeals, Springfield (277 S.W. 2d 857).





CIBA

Nonsoporific tranquilizer

Especially indicated for Old People and Children

Highly compatible vehicle

New SERPASIL ELIXIR is compatible with Pyribenzamine Elixir, dextre-amphetamine suitate clixir, Antronyle Syrup, codeine phosphate ophedrine suitate, sedium calleyiate and many other medicatione. Serpasil Elixir has a clear light-groon color and a pleasant lemon. Hime flavor. Each 4-mi. teaspeenful contains O.S mg. of Strpasil.

Expert Testimony—Certainty

PROBLEM: A man employed as a watchman in a building under construction that was heated by salamander stoves died. At the industrial commission hearing, a medical expert testified that he believed that the effects of fuel oil combustion poisons containing carbon monoxide aggravated the worker's illness and that death was caused by glomerulonephritis, uremia, and carbon monoxide poisoning. Did the commission err in rejecting the opinion as being wholly speculative?

COURT'S ANSWER: Yes.

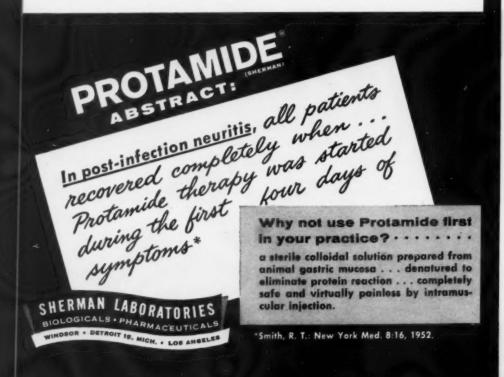
The Minnesota Supreme Court said that an opinion must be based upon adequate factual hypotheses but need not be expressed in any set wording or with absolute certainty (69 N.W. 2d 805).

Trauma—Cause of Thrombosis

PROBLEM: In a workmen's compensation proceeding, 4 medical experts agreed that death of an upholsterer was caused by coronary thrombosis. They sharply disagreed as to whether the exertion required to move chairs brought on the fatal attack. Was an award of compensation on a theory of accidental injury sustainable?

COURT'S ANSWER: Yes.

The Minnesota Supreme Court concluded that since specialists do not agree on whether trauma or exertion can cause a blood clot and resulting thrombosis, an appellate court cannot say that one view is clearly right and the other clearly wrong. Therefore, the basic question remains unsolved (69 N.W. 2d 636).



The original Prenatal therapy formulated by our founder, Dr. Llwellyn Lewis, M.D., several decades ago, has been the basic calcium therapy for over 12 million mothers throughout the free world.

The results of sustained research[†] and development through the years brings another clinical advance to meet the challenge for even healthier mothers and babies.

*T.M. APPLIED FOR



CALCINATAL*

Six tablets provide:

Calcium from Calcium Lactate (anhydrous)	2 Gm.
Ferrous Gluconate 130 mg. providing	15 mg Verrous iron
Vitamin A Acetate	6000 USA Duits
Thiamine Hydrochloride	1.5 mg. \ \
Riboflavin	2.5 mg.
Niacin	15 mg.
Ascorbic Acid	
Vitamin D	400 USP Units
Vitamin Biz-Intrinsic Factor	1 1
Concentrate	0.5 USP Units **
Aluminum Hydroxide gel	750 mg

** Standardized before mixing.

120 TABLETS PER BOTTLE

LOS ANGELES 38 CALIFORNI

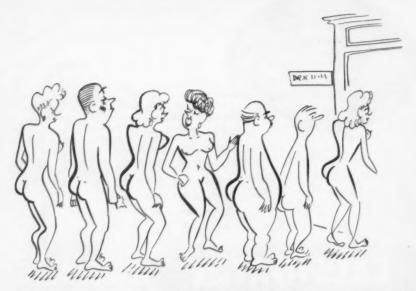
Doctor: as a dietary supplement during pregnancy and lactation 6, or more, Calcinatal tablets daily.

This formula provides the exact recommended daily dietary allowances for those factors present as established by the Food and Nutrition Board of the National Research Council for lactating women.

Calcium Lactate is free of phosphorus which is known to depress assimilation of calcium.

Organic form of ferrous iron, by far, the best tolerated.

Aluminum Hydroxide gel added to assist in the elimination of excess dietary phosphorus.



"It happens every year after his week's training with the army reserve."

in rheumatoid arthritis

now available...the second new Schering corticosteroid

METICORTelone

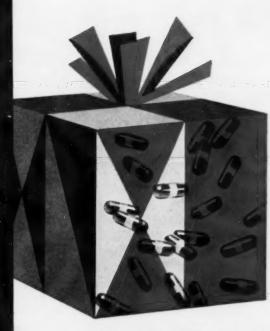
PREDNISOLONE (metacortandralone)



"possesses an augmented therapeutic ratio" over cortisone and hydrocortisone

BL-2-37

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FOR

"MANY

HAPPY

RETURNS

OF

THE

DAY"

GERIPLEX

KAPSEALS GERIATRIC VITAMIN-MINERAL COMBINATION

The future is more likely to have "happy returns" for your middle-aged and older patients who avoid nutritional deficiencies.

Prophylactic use of GERIPLEX simplifies correction of dietary inadequacies that eventually lead to debility and to tissue damage. One Kapseal per day supplies mineral nutrients, eight important vitamins, and the starch-digestant Taka-Diastase*...all in ample amounts to supplement the average diet.

During febrile illness, during preoperative, postoperative and convalescent periods, and at other times when nutritional requirements are elevated, increased dosage of GERIPLEX will help maintain optimal vitamin-mineral intake.

GERIPLEX Kapseals are supplied in bottles of 100 and 500.



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Watch for MEDICAL HORIZONS

-the documentary story of recent advances in medicine, brought to you on television by CIBA. Beginning September 12, this new series of programs will be telecast every Monday night over ABC channels in major cities throughout the country.

Pyribenzamine

(tripolennamine hydrochloride CIBA)

exerts maximum antiallergic action during the period of allergic stress...

Average Dose:

10-mg, toplets (scored),

...with freedom from prolonged drug effect in asymptomatic periods

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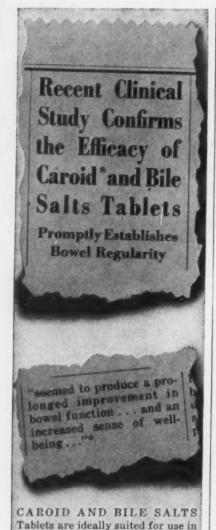
-a newspaper sponsored by CIBA exclusively for the medical profession. Issued every other week, MEDICAL NEWS will bring you factual reporting of current events in the world of medicine.

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C I B A SUMMIT, N.J.



MODERN MEDICINE, September 15, 1955 57



the management of constipation, par-

ticularly when associated with bil-

iary stasis and impaired digestion.

American Ferment Company, Inc.

1450 Broadway, New York 18, N. Y.

Perry, M.: Internat. Rec. Med. 167:489

(Sept.) 1954.

Safety of Air Travel for Patients; Disorders Resulting from Flying

K. L. STRATTON, M.D. New York City

Doctors are concerned with aviation because [1] patients may require advice on safety of air travel, [2] several slight disturbances are caused by flying, [3] pilots or crew members may be patients, and [4] airplane ambulance service is sometimes desirable.*

Since modern commercial transport planes have pressurized cabins and fly above turbulence, few patients cannot travel safely and comfortably by air.

Pressurized cabins do not maintain sea level pressure, but the cabin altitude generally does not rise above 8,000 ft. when the plane is at 25,000 ft.

Persons with recent myocardial infarction or decompensation should not fly. Patients with coronary attacks are acceptable if [1] the last attack was more than six months ago, [2] the electrocardiogram is stabilized, [3] slight exercise is tolerated, and [4] cyanosis or dyspnea is not produced by exertion. Air travel is not advisable for patients with congestive failure or severe coronary insufficiency.

Persons with hypertension can fly but careful evaluation is neces-(Continued on page 61)

*Medicine's importance in aviation. New York J. Med. 55:1129-1135, 1955.

New study confirms T. E. D. Elastic Stocking Routine SAVES LIVES

In a study of 9,917 hospital patients, the expected incidence of fatal pulmonary embolism was reduced by 65% at a cost of about $2\frac{1}{2}\phi$ per bed per day.

In new studies at Massachusetts Memorial Hospitals, T.E.D. Elastic Stockings were applied routinely to all adult patients (except in cases of ischemic vascular disease of the legs in which the use of the stockings is contraindicated). Data on the incidence of pulmonary embolism was carefully compiled and interpreted.

The result was a 65% reduction in the incidence of fatal pulmonary embolism.

Since most fatal emboli originate in the deep calf veins of the legs, usually as a result of the circulatory stasis incident to bed rest, prophylaxis is easily accomplished by the use of T.E.D. elastic stockings. These stockings, developed by Bauer & Black, speed blood flow and minimize clot propagation.

A complete report of the above study appeared in the New England Journal of Medicine. You may obtain a reprint for your files by writing to Bauer & Black Research Laboratories, 309 West Jackson Boulevard, Chicago 6, Illinois.

COST OF T. E. D. STOCKINGS AVERAGES
LESS THAN 21/2 PER BED PER DAY

The quantity price of T.E.D. Elastic Stockings is only \$2.45 per pair. When you furnish 3 pairs per active bed per year the cost averages only 2½ cents per day.



Specimen of deep calf veins opened to show ante mortem clot filling peroneal and posterior tibial veins. From such clots fatal and non-fatal pulmonary emboli result. (Specimen photograph courtesy of Joseph R. Stanton, M.D., Massachusetts Memorial Hospitals and Boston University School of Medicine.)

T. E. D. ELASTIC STOCKINGS

(BAUER & BLACK)

Division of The Kendall Company



quick ...

what's a good B complex?

sur-Bex° with C

(ABBOTT'S B-COMPLEX TABLETS WITH C)

Each SUR-BEX with C tablet supplies:

* Thiamine Mononitrate 6 mg.
 Riboflavin 6 mg.
* Nicotinamide 30 mg.
Pyridoxine Hydrochloride 1 mg.
Vitamin 812 (as vitamin 812 concentrate) 2 mcg.
Pantothenic Acid (as calcium pantothenate) 10 mg.
Ascorbic Acid 150 mg.
iver Fraction 2, N.F 300 mg. (5 grs.)
ewer's Yeast, Dried 150 mg. (2½ grs.)

abbott

As a dietary supplement: 1 or 2 tablets daily.

Fer stress, or postoperative convalescence: 2 or more tablets daily.

509194

AVIATION MEDICINE

sary if diastolic pressure is above 110 mm. Hg. Prodromal symptoms, such as stroke or asthma, prohibit flight.

Persons with lung diseases should have medical attendants and a supply of oxygen during flight. Air travel is hazardous with status asthmaticus, active tuberculosis, lung abscess or carcinoma, pneumothorax, or bronchiectasis and within three months after lobectomy or pneumonectomy.

Anemic persons may fly if hemoglobin is above 60%.

Pregnant women beyond eight months of gestation; infants younger than ten days; psychotic and other agitated persons with mental disease; and patients with epilepsy, active and bleeding peptic ulcers, recent abdominal operations, draining sinuses, or osteomyelitis should not fly. Travel of individuals with contagious diseases is regulated by the public health service.

The oxygen supply generally carried on aircraft is not sufficient to provide oxygen to a patient throughout a flight. Therefore, individuals needing oxygen should rent a tank of the gas with reduction valve and mask.

Aerotitis media or barotitis may be caused by closing of the eustachian tube and increased pressure on the external surface of the tympanic membrane during flight. Persons with rhinitis or postnasal infections are susceptible to the disorder. When aerotitis is chronic, nasopharyngeal irradiation may relieve

FOR A GOOD NIGHT'S SLEEP WITHOUT BARBITURATE HANGOVER

For hypnosis: 2-grain capsules / For daytime sedation: 1-grain capsules



excessive lymphoid hyperplasia near the pharyngeal orifice.

If a passenger notes a plugging sensation during descent, pressure in the middle ear can be equalized by chewing gum, swallowing, or drinking water. When the drum is retracted, pain is severe and can be relieved by Empirin compound or codeine, catheterization of the eustachian tube, vasoconstrictoris, or dry heat.

Motion sickness is uncommon and may be prevented by drugs.

Flight surgeons of commercial airlines refer pilots and crew members with signs and symptoms to a private physician. If a flight surgeon recommends that a pilot discontinue flying and the pilot disputes the decision, the physician is asked

morning fatigue...

evening alertness...

to settle the divergence of opinion.

A practitioner may desire to transport an acutely ill patient to a therapeutic center by air. Ambulance planes are available at several places throughout the United States and Canada. Space for a nurse and physician is provided.



When a patient complains of morning fatigue and evening alertness, a diagnosis of hypometabolism should be considered. If, in addition, the patient has two or more of the following symptoms: cold intolerance, brittle nails, dry skin, lack of perspiration or menstrual difficulties, the diagnosis is probable. A slow pulse and a low awakening body temperature make the diagnosis even more secure.

(Watson, B. A.: N. Y. State J. Med. 54: 2049, 1954.)

Hypometabolic States...R ... thyrar

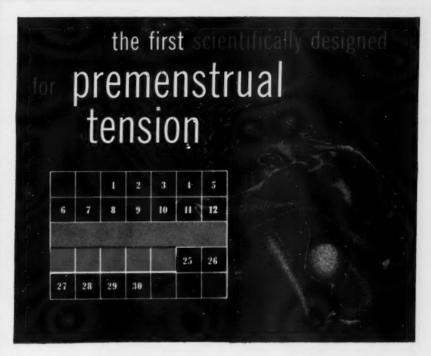
prepared exclusively from beef sources . . . provides whole gland medication at its best. Superior uniformity assured by chemical assay and biological test.

Standardized equivalent to Thyroid, U.S.P. tablets of $\frac{1}{2}$, 1 and 2 grains. Bottles of 100 and 1000.



THE ARMOUR

A DIVISION OF ARMOUR AND COMPANY . KANKAKEE, ILLINOIS



neo Bromth

Brand of Bromaleate, Brayten



NEO BROMTH, the first preparation developed specifically for treatment of premenstrual tension, continues to be found the most satisfactory therapeutic agent in this condition.

Bickers found that "abnormal water storage can be blocked or eliminated and clinical relief of symptoms obtained in most patients . . . "I with NEO BROMTH.

Greenblatt recently stated: "Clinically, we share Bickers' enthusiasm for this drug in the management of premenstrual tension, especially where there is associated edema."²

NEO BROMTH is non-toxic, non-hormonal therapy and contains no ammonium chloride. Each 80 mg. tablet contains 50 mg. of pamabrom (2-amino-2-methyl-1-propanol 8 bromo-theophyllinate) and 30 mg. of pyrilamine maleate.

Dosage: 2 tablets twice daily (morning & night) beginning at onset of symptoms—usually 5 to 7 days before menses. Discontinue at onset of flow. Supplied in bottles of 100 tablets on prescription only.

Bickers, W.: Southern M.J., 46:873, Sept., 1953
 Greenblatt, R.: GP, 11:66, March, 1955

BRAYTEN PHARMACEUTICAL COMPANY Chattanooga 9, Tennessee



S.K.F.'s antidepressant analgesic

For optimum results in dysmenorrhea



tablets per dose

Smith, Kline & French Laboratories, Philadelphia

*T.M. Rog. U.S. Pat. Off.

Methods for Prevention of Automobile Accidents

FLETCHER D. WOODWARD, M.D., AND CARY N. MOON, JR., M.D.

University of Virginia, Charlottesville

Physicians should work for introduction of compulsory driving courses in all schools, incorporation of safety features in design of automobiles, and investigation of medical standards for drivers.*

Driving permits should be issued only to persons who have successfully completed a course in safe driving. The accident rate is lowest among individuals who have received such training.

Many injuries could be prevented by alterations in design of the automobile. Among 145 accident victims, 80% of head, hip, and leg injuries resulted from impact against the windshield or dashboard. Contact with the steering wheel caused 66% of chest injuries.

Recommended safety features are:

- A governing device to limit speed to 55 miles per hour
- Ejectable windshield
- Padded dashboard
- Elimination of knobs and buttons
- Oleo shock absorbers on front bumpers, as on landing gear of airplanes
- Hydraulic steering column that
 (Continued on page 68)

The physician's responsibility in the prevention of automobile accidents and deaths. Virginia M. Monthly 82:169-172, 1955.

aging changes the bone picture

OSTEOPOROSIS CAUSES BONE TO BECOME FRAGILE, LESS ELASTIC, AND MORE SUSCEPTIBLE TO FRACTURES.

In the aging patient, healing of fractures is often delayed because impairment of osteoblastic activity due to declining sex hormone function causes the bone matrix to atrophy.

Osteoporosis occurs in both sexes but is more prevalent in the female.² This is explained by Reifenstein on the basis that "gonadal function in old persons is more markedly reduced in females than in males." ³



Femur, fracture, oblique, upper third

- 1. Incomplete union of fracture in patient with postmenopausal osteo-porosis.
- Normal union exhibiting a proper ratio between osteoblastic and osteoclastic activity.



DIFFICULT TO DETECT

It is virtually impossible to detect with accuracy any change in bone density until at least 30 per cent of the calcium previously present is lost. Therefore, clinical manifestations of osteoporosis usually appear long before x-ray evidence of the disease can be obtained.³

SIGNS AND SYMPTOMS

- "Low back pain" or dull, tired, aching feeling along the spine
- Nervousness, weakness, easy fatigability
- · "Rounding" of the shoulders
- Increased susceptibility to fracture, particularly of the hip, in elderly women

Osteoporosis is almost "physiologic" after the menopause, and if all women in this age group "are carefully studied, about 10 per cent of them will be found to have clinical osteoporosis."

WHY "PREMARIN" WITH METHYLTESTOSTERONE THERAPY IS RECOMMENDED

"Premarin" with Methyltestosterone therapy utilizes the complementary effects of combined estrogen and androgen on bone and protein metabolism. Estrogen stimulates osteoblastic activity and increases calcium and phosphorus retention, while androgen exerts an anabolic or protein-forming action. The incidence of undesired side effects is minimized by reason of the opposing action of the two steroids on sexlinked tissues.

OSTEOPOROSIS RESPONDS TO COMBINED ESTROGEN-ANDROGEN

Older women with fractures, particularly of the hip, respond especially well to combined estrogen-androgen therapy. Pain in the spine and other bones is relieved considerably or completely within weeks to months. "The body weight frequently increases, the skin appears to be thicker, strength is increased, and the general well-being is much improved."3 The prognosis for bone recalcification is good, provided therapy is continued for extended periods.

SUGGESTED DOSAGES

"Premarin" with Methyltestosterone may be administered in the following dosage schedule: 2 or 3 tablets No. 879 (yellow) daily, or 4 to 6 tablets No. 878 (red) daily.

In the female, it is suggested that combined therapy be given in 21 day courses with a rest period of about one week between courses, and be continued for 6 to 12 months; following this period, the patient may be maintained with cyclic therapy employing "Premarin" Tablets alone.

In the male, a careful check should be made on the status of the prostate gland when therapy is given for protracted intervals.

- Steindler, A., in Stieglitz, E. J.: Geriatric Medicine, ed. 2, Philadelphia, W. B. Saunders Company, 1949, p. 693.
- 2. Albright, F., Smith, P. H., and Richardson, A. M.: J.A.M.A. 116:2465 (May 31) 1941.
- Reifenstein, E. C., Jr., in Harrison, T. R.: Principles of Internal Medicine, Philadelphia, The Blakiston Company, 1950, pp. 651, 655.

4. Wilson, T. M.: M. Ann. District of Columbia 23:489 (Sept.) 1954.

PREMARIN" with METHYLTESTOSTERONE

ideal preparation for combined estrogen-androgen therapy

For the relief of

Postpartum Breast Engorgement

(when lactation is to be suppressed)

"Premarin" with Methyltestosterone has been successfully employed to relieve the discomfort of postpartum breast engorgement with virtually none of the unwanted side effects likely to occur with estrogen or androgen alone.

Other Indications

- Osteoporosis
- Dysmenorrhea
- Frigidity
- Climacteric (female and male) in certain cases
- Malnutrition (in the female)
- As an adjunct to treatment with cortisone in rheumatoid arthritis

SUPPLIED IN Two POTENCIES: the *yellow* tablet (No. 879) contains 1.25 mg. of conjugated estrogens (equine) and 10 mg. of methyltestosterone; the *red* tablet (No. 878) contains 0.625 mg. and 5 mg. respectively. Both potencies are available in bottles of 100 and 1,000 tablets.

Complete information on therapy may be obtained from your Ayerst representative or by writing to Ayerst Laboratories, 22 East 40th Street, New York 16, N. Y.

"PREMARIN" with METHYLTESTOSTERONE

ideal preparation for combined estrogen-androgen therapy



Ayerst Laboratories . New York, N. Y. . Montreal, Canada



in sickness and in bealth

An electrocardiograph, such as a Viso-Cardiette, plays a double diagnostic role in the investigation of cardiac conditions.

When heart disease is present, the contribution of a 'cardiogram to the clinical picture is of indisputable value.

But, often overlooked is its importance in the patient without heart disease. Becoming more and more a part of the general examination, or check up, the electrocardiogram places in the physician's files information concerning the healthy patient that can well be of future value. Not only does it provide a norm or control with which to watch or study any progressive pathological changes, should they occur, but when heart disease extiles it is on head to

but, when heart disease strikes, it is on hand to compare with the new record for information which would not have been otherwise available.

When you make your investment in better cardiac diagnosis by purchasing an electrocardiograph, be sure to consider the extra dividends that a Sanborn Viso-Cardiette will pay in accuracy, simplicity, and dependably continuous service.

Write for descriptive literature and information about a unique, no-obligation, 15-day clinical test plan.





for the younger set



Fast-acting Pediatric ERYTHROCIN provides blood levels within 2 hours, with effective concentrations lasting for 8 hours. Pediatric ERYTHROCIN offers you specific therapy against staph-, strep- and pneumococci. And it's especially useful when the infecting organism resists penicillin and other antibiotics. It's well tolerated because ERYTHROCIN destroys only the harmful cocci—yet spares intestinal flora. Thus, little patients rarely get side effects. Nor do they get the reactions often seen with penicillin. There's no administration problem, either. Children take-and really like-the rich, cinnamon aroma and sweet, candy taste of Pediatric ERYTHROCIN Oral Suspension. It's stable (for at least 18 months) and comes readymixed in 2-fl. oz. bottles.

Pediatric Erythrocin Stearate (ERYTHROMYCIN STEARATE, AND OTT)

GUV146

ORAL SUSPENSION

PUBLIC HEALTH

moves forward under a force of about 100 foot-pounds

- Rigidly locked front and rear seats
- · Safety belts
- Polarized windshield and headlight lenses.

The American Medical Association and other national societies should prepare a list of diseases, physical conditions, and drugs to be considered before a drivers' permit is issued or renewed. A small percentage of accidents result from drugs, physical disability, or illness, but in view of the large injury rate, even 2 or 3% is a sizable number.

Nervous system conditions that may impair driving safety are narcolepsy, petit mal, grand mal, subarachnoid hemorrhage, cerebral vascular accident, intracranial disease, increased intracranial pressure, mental deficiencies, senility, psychoses, postlobotomy, Parkinsonism, neuropathies, neuromuscular disorders, paraplegia, and hemiplegia. Some patients with disorders of the nervous system are safe drivers after treatment is given.

Many serious traffic violators are egocentric individuals of low intelligence. If health departments set up clinics to work with traffic courts, unfit drivers could be recognized and secondary offenses prevented.

Disabilities of special senses to be considered are Menière's syndrome and other vestibular disturb-

(Continued on page 72)





An Oldeal Antacid-Laxative



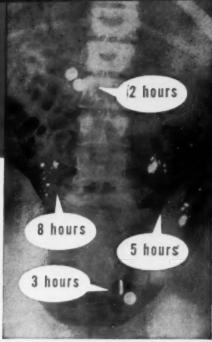
INIMITABLE.

Quality and demonstrated dependability for over three-quarters of a century... consistently and universally accepted above all others...the prestige of Phillips' Milk of Magnesia may be measured by the overwhelming majority of those who prescribe it...the medical profession.



Companie X-ray visualization of the custained release of Dura-Tab S.M. (Individual X-rays on file.)

Sustained medication with a predictable release rate



DURA-TAB S.M.*

SUSTAINED MEDICATION TABLETS†

The Wynn S.M. process is distinctive in that it provides an even, continuing release of medication over a period of 8 to 10 hours, with therapeutic effectiveness to 12 hours. The action of the medication is maintained at the optimum therapeutic level. Clinical tests over the last 2 years have proved the value of this new type of therapy.

Dura-Tab S.M. Tablets do not have a series of enteric coatings, nor are they coated granules. This new process assures a constant, predictable release of the medication, with no "up-and-down" effects.

Samples and literature on request

Dura-Tab S.M. Tablets are supplied in a number of formulas:

Homatal

Homatropine methylbromide 1/4 gr. Phenobarbital I gr.

Dexatal No. 1

d-Amphetamine Sulfate 15 mg. Phenobarbital 34 gr.

Dexatal No. 2

d-Amphetamine Sulfate 10 mg. Phenobarbital ½ gr.

Dextro-Amphetamine Sulfate in 15 mg. and 10 mg. Dura-Tab S.M. Tablets

Wynn Pharmacal Corporation

5111-25 West Stiles Street, Philadelphia 31, Pa.

"T.M. Reg.

tPat. applied for.

PUBLIC HEALTH

ances, hearing of less than 30 decibels unless correctible by hearing aid, and visual defects.

Cardiovascular disabilities that may interfere with driving ability are essential hypertension of grade IV, carotid sinus hypersensitivity, visual and ocular muscular defects, aortic stenosis, and severe angina pectoris. The period after coronary thrombosis may also be dangerous. Persons with heart disease should be alert to symptoms of an impending attack and familiar with effects of drugs.

Miscellaneous conditions likely to cause accidents are exogenous or endogenous hyperinsulinism, acute febrile illness, postoperative periods, narcotic addiction, and alcoholism. No person taking insulin should be allowed to drive a commercial vehicle.

Alcoholism accounted for 18% of fatal accidents last year. As little as 0.05% of alcohol in the blood, produced by 2 oz. of whiskey, may increase a driver's liability to cause an accident.

Physical conditions detrimental to safe driving are amputations, paralyses, advanced age, arthritic deformities, and some plaster cast applications.

Drugs, including sedatives, narcotics, anticonvulsive agents, and vasodilators, may be accident factors. A patient should be warned of drug reactions or symptoms likely to impair driving safety and, when necessary, ordered not to drive an automobile.



unexcelled among sulfa drugs . . . for highest potency

Valid tests, substantiated by clinical trial, show that Triple Sulfas have outstanding therapeutic efficiency among sulfa drugs. Widespread use has confirmed this fact. Furthermore, this proved combination of sulfas provides notable safety, wide range in effectiveness, and definite economy. Triple Sulfas are available from leading pharmaceutical manufacturers under their own brand names. Remember: all sulfas are not Triple Sulfas. Ask any medical representative about the Triple Sulfa products his company offers!



TRIPLE SULFAS

Meth-Dia-Mer Sulfonamides





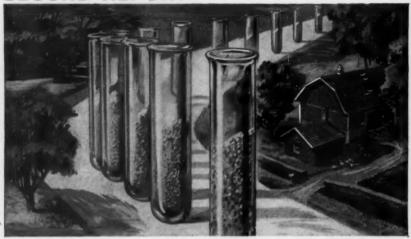


HOW SQUIBB OFFERS TRIPLE SULFAS

Terfonyl contains 0.167 Gm. of each of the Triple Sulfas per 0.5 Gm. tablet or 5 cc. of suspension. It is recommended for all sulfonamide-susceptible infections, particularly those requiring high blood levels, and for patients who cannot tolerate treatment with single sulfas because of poor kidney function. Terfonyl Tablets, 0.5 Gm., bottles of 100 and 1,000. Terfonyl Suspension (raspberry flavor), 0.5 Gm. per 5 cc., pint bottles.

"TERFONYL" is a Squibb trademark

SECOND REPORT



LECITHIN RESEARCH-AT THE BEND OF THE ROAD

The Therapeutic Usefulness of Lecithin - a natural phospholipid

Because lecithin, a natural, edible food constituent, is an excellent emulsifying agent its application in diseases characterized by disturbed fat absorption and metabolism is logical. Research has proved its value in facilitating intestinal absorption of fats and fat-soluble substances such as vitamin A.1-5 For this reason it suggests itself as worthy of trial in treating underweight and steatorrheal diseases (sprue, celiac disease, etc.).

Encouraging results were also achieved in the management of psoriasis, together with dietary and topical measures, and in fatty livers. In the treatment of diabetes, lecithin together with vitamin E has reduced insulin requirements in certain patients. Research on its potentially useful role in the more complicated forms of deranged lipid and cholesterol metabolism—as encountered in essential hyperlipemia, idiopathic familial hypercholesteremia, xanthomatosis, diabetes, etc.—is now being actively conducted.

An excellent source is Glidden's "RG" Oil-free Soya Lecithin, a highly purified extract containing a minimum of 95% phospholipids. It is packed in a specially designed 8 oz container to maintain its purity and freshness and is available at your drugstore.

Dosage: Investigators of lecithin have used quantities from 7.5 to 30 grams daily in divided doses. (3 teaspoonfuls equal 7.5 grams.)

Administration: "RG" Lecithin is presented in palatable granules which may be taken plain, in milk, in orange juice or other citrus juices, or sprinkled on cereal.

Literature available on request.

Bibliography: 1. Adlersberg, D., and Sobotka, H.: J. Nutrition 25:255 (March) 1943. • 2. Adlersberg, D., and others: Gastroenterology 10:822 (May) 1948. • 3. Adlersberg, D.: New York J. Med. 44:606 (March 15) 1944. • 4. Adlersberg, D., and others: Am. J. Digest. Dis. 16:333 (Sept.) 1949. • 5. Augur, V.: Rollman, H. S., and Deuel, H. J., Jr.: J. Nutrition 33:177 (Feb.) 1947. • 6. Gross, P., and Kesten, M. B.: New York J. Med. 50:2883 (Nov. 15) 1950. • 7. Schettler, G.: Klin. Wchnschr. 30:627 (July) 1952. • 8. Dietrich, H. W.: South. M. J. 43:743 (Aug.) 1950.

GLIDDEN RG'LECITHIN

THE GLIDDEN COMPANY + CHEMURGY DIVISION





Laxative action ... suited to his routine

Relief of temporary constipution:

Agoral is suited to the acutely constipated patient who can neither take time off for a "purge," nor time-out to answer the sudden urge induced by strong laxatives: the head of a one-man business; the executive committed to a day of important conferences; the bus driver on a long haul; people in the theatre, the pulpit, the factory, the home. For all who need relief of temporary acute constipation, pleasant tasting Agoral provides positive results without urgency.

No urgency; evacuation which adjusts to schedule: A dose taken at bedtime almost invariably produces results the following day. Elimination is comfortably achieved by mild, positive peristaltic action, not by violent paroxysms of unrestrained hyperperistaltis.

No griping; interim discomfort avoided: Agoral's action is sustained uniformly during its passage through the intestinal tract; and it causes no uncomfortable griping, embarrassing flatulence, distention or stomach distress.

Dosage: On retiring, ½ to 1 tablespoonful taken in milk, water, juice or miscible food. Repeat if needed the following morning two hours after eating. Contraindications: symptoms of appendicitis; idiosyncrasy to phenolphthalein.

Supplied: bottles of 6, 10 and 16 fluidounces; and as Agoral Plain (without phenolphthalein), bottles of 6 and 16 fluidounces.

Agoral

mineral oil emulsion with phenolphthalein

WARNER-CHILCOTT

doubles the power to resist food in obesity

Obocell has this double action:

- 1. Controls your patients' appetites at meals.
- 2. Appeases their gnawing bulk hunger.

More than that, the effect of Obocell "carries over" between meals so that your patients are not tempted to break their diets.

And Obocell saves money for your patients

IRWIN, NEISLER & COMPANY . DECATUR, ILLINOIS . TORONTO 1, ONTARIO



Obocell

Each Obocell tablet contains:

d-Amphetamine Phosphate (dibasic) 5 mg Nicel* 160 mg.

*Irwin-Neisler's brand of High Viscosity Methylcellulose.

Bottles of 100, 500 and

Washington Letter

Fight Foreseen on Federal Disability Payments

IN these months between sessions of Congress, a bitter, no-holds-barred fight is in the making over one medical-welfare issue. It is the question of whether to pay cash benefits for disabled workers under the federal Old Age and Survivors Insurance system.

The proposal is to make monthly payments to persons as soon as they become disabled, instead of requiring them to wait until age 65 as under present law. Proponents of the idea say it is just as simple as it sounds, and just as logical. If this is an insurance system, they ask, why shouldn't a worker have some protection against the hazards of disability? Is there justice in asking



"M-m-m, I don't like the looks of that. Prepare the filter for a fresh cartridge insert immediately."

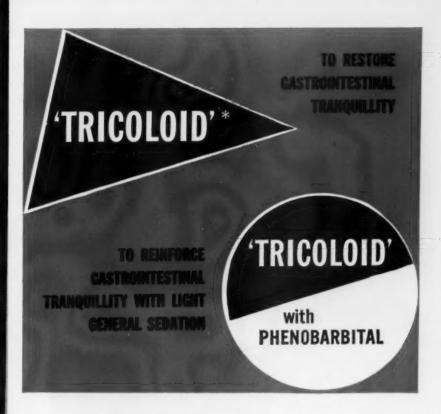
a cripple to wait ten, thirty, or forty years before he can draw on his own OASI funds?

Almost without exception, professional welfare people support this plan as the next step in building up a strong social security system. But the opposition is also strong and articulate and can marshal a great deal of logic.

In 1954 a preliminary move in the direction of cash payments for disability was made by Congress when it enacted a "waiver of premium" law. Under this the disabled worker's pension rights are "frozen" as soon as his disability has been certified. This way the pension due him at age 65 will not be reduced because of the years when he had little or no income because of his disability.

The Eisenhower administration, which sponsored that provision last year, is hesitating at the next step—cash payments as soon as disability is established. Administration experts would rather know the results of experience with the pension "freeze" before moving further ahead. They believe the "freeze"—just now getting under way—will serve as a guide in setting standards and procedures for determining disability.

(Continued on page 84)



'TRICOLOID' or 'TRICOLOID' with Phenobarbital is indicated, according to the degree of emotional tension which accompanies the symptoms, for the medical management of:

"lower bowel syndrome," nervous indigestion, functional gastroenteritis, peptic ulcer.

*TRICOLOID' brand Tricyclamol 50 mg. Sugar-coated tablets

TRICOLOID' brand Tricyclamol 50 mg. with Phenobarbital 16 mg. (gr. ¼)

Sugar-coated tablets

Both products in bottles of 100 and 1,000.



BURROUGHS WELLCOME & CO. (U. S. A.) INC., Tuckahoe, New York



When your ears tell you that a patient may be "caffein sensitive," he doesn't have to give up drinking coffee. He only needs to give up drinking caffein. Why not suggest Sanka Coffee—97% caffein-free?

New extra-rich Sanka is a wonderful coffee, Doctor. You'll enjoy it yourself.





Products of General Foods

SANKA COFFEE

DELICIOUS IN EITHER INSTANT OR REGULAR FORM



placid plodder

No dynamo of activity, the Spotted Salamander plods its placid life, alternating mostly between hibernation and estivation.

Homo sapiens, more vigorous and aggressive, is also more susceptible to psychosomatic ills, among them peptic ulcer. When this occurs, pleasant-tasting TITRALAC is a logical prescription. TITRALAC gives relief in minutes that lasts for hours. This has been demonstrated by in vitro tests on 16 commonly used antacids. In this study, TITRALAC

"... brought the pH up the most rapidly and to the highest level of all the preparations which were investigated. The sustaining power was stronger, in addition."

Hammarland, E. R., and Rising, L. W.:

TITRALAC°

unique antacid*-with milk-like action

*TTRALAC is Schenley's preparation of glycine + calcium carbonate; U.S. Patent No. 2,429,596



SCHENLBY LABORATORIES, INC . NEW YORK 1, NEW YORK

first in advances... first in advantages...

digitaline nativelle°

- first digitalis glycoside isolated (digitoxin)
- first in world usage and favorable clinical reports
- first with intravenous form and pediatric oral liquid
- first color-coded tablets to avoid dosage error
- first digitalis glycoside with specific intramuscular form—avoids irritation often encountered when intravenous preparations are administered intramuscularly
- first with a complete range of interchangeable dosage forms to meet the patient's changing needs

Consult your Physicians' Desk Reference for dosage information.

Originators of the Cardiology Desk-Aid Series. Send for complimentary set.

VARICK PHARMACAL COMPANY, INC.
(Division of E. Fougera & Co., Inc.)
75 Varick Street, New York 13, N. Y.

"...the preparation of choice"*

compared to other digitoxins...

"...better in maintenance therapy..."

"...will generally require a lesser dosage..."

"...better tolerated by the average patient..."*

Comparative maintenance dosage and effect on pulse rate in cardiac patients*

digitoxin

digitoxin

digitoxin

84.0/minute

79.8/minute

average daily maintenance dosage

pulse rate 7/1/7

digitaline nativelle

A Better Therapeutic Response With Smaller Dosage

Schwartz, G.: Am. Pract. & Digest Treat. 1:61, 1950.

Also, as the then Secretary Hobby told Congress in July, the proposal would set up an entire new category under the law—individuals with the right to a pension because of a physical or mental condition, often difficult to determine, rather than the simple requirement of age.

Mrs. Hobby and a number of other spokesmen for the administration pointed out a whole series of objections to fast action on the disa-

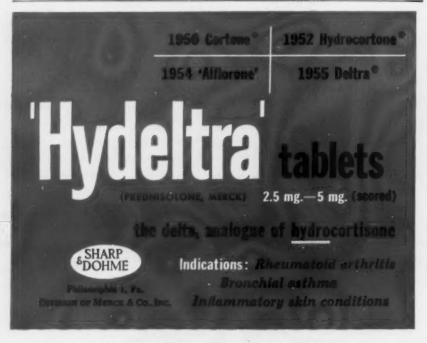
bility proposal.

For one thing, the bill now before Congress (for decision next year) would have the states set up and operate the programs, but all the pension money would come from the OASI trust fund, which is collected and supervised by the Federal government. The question is whether the states should be allowed to pass out federal money with only nominal federal supervision.

There is also the element of cost. If the disability provision is enacted, the new schedule of payroll taxes calls for the self-employed to be paying 634% of their earnings in twenty years. Under these rates, the family with two children and a \$4,200 income would be paying more in OASI taxes than in federal income taxes. Would they consider they were getting a bargain?

Representatives of the Department of Health, Education, and Welfare have made quite a point of the argument that, human weakness of character considered, the

(Continued on page 88)



"THIS LOTION SURE WORKS ON ACNE... AND YOU DON'T EVEN NOTICE IT!"



ALMAY division of Schieffelin & Co.

New York 3, N. Y.

PRODUCT OF ORIGINAL RESEARCH BY NATIONAL DRUG



direct anti-edema anti-inflammatory agent

INTRAMUSCULAR TRYPSIN, solvent purified, crystalline enzyme in Sesame Oil suspension

In local stress conditions - the physiological reaction is toward a break through to establish "metabolic continuity" and to mobilize the basic biology of resistance and recovery.

Clinical and experimental evidence demonstrates the superior effectiveness of a wide-range, direct-acting and pro-teolytic enzyme, such as trypsin, in the treatment of traumatic edema. PARENZYME is the only available preparation with a direct depolymerizing effect on the soft fibrin and other denatured tissue protein deposits forming a mechanical barrier around the injured area. Every physiologic restorative process present in the blood is made available for absorption of edema and necrotized tissue, lessening pain, reducing inflammation, and speeding the healing process.

"Metabolic continuity" with healthy contiguous tissue to hasten repair of damaged tissue embraces such factors as:

- I reduction of mechanical obstruction of vascular channels due to edema
- 2 depolymerization of macromolecules
- 3 modified permeability
- 4 facilitate the removal of edema fluid

PARENZYME - in acute inflammation with peripheral vascular disease-acute and chronic recurrent thrombophlebitis; diabetic cellulitis; leg ulcers, provides considerable improvement in the inflammatory component.

In THROMBOPHLEBITIS PARENZYME

significantly reduces the incidence of pulmonary emboli, and initiates biochemical reactions resulting in prompt and



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sustained subsidence of the signs of acute inflammation: pain, edema, redness, Homan's sign, fever, elevated sedimentation rate, leukocytosis, and inability to walk.

advantages of PARENZYME

INTRAMUSCULAR TRYPSIN

- safe method of administering parenteral trypsin; no major side effects.
- a known amount of active enzyme is used
- no metabolic derangements such as often occur with other anti-inflammatory agents
- not anticoagulant
- early ambulation and return to full activity
- enhances use of antibiotic therapy
- can be used in conjunction with any other treatment you prescribe

The cardinal indication for trypsin is acute inflammation, regardless of etiology. Other indications:

TRAUMATIC WOUNDS

slow-healing wounds bruises contusions black eyes

SKIN ULCERS

decubitus diabetic varicose

VASCULAR DISORDERS

phlebitis thrombophlebitis phlebothrombosis

DPHTHALMIC

iritis iridocyclitis chorioretinitis

Write for literature and samples for clinical trial.

BIBLIOGRAPHY: Innerfield, I., Surgery, 36:1090, 1954; Innerfield, I., J.A.M.A. 156:1056, 1954; Golden, H. T., Delaware State Med. J., Oct. 1954, p. 1; Fisher, M. M., and Wilensky, N.D., N.Y. State Jour. of Med., 54:659, 1954; Hopen, J. M., J. Albert Einstein, Med. Center, Nov. 1954, p. 39; Hopen, J. M., Amer. J. Opth., 38:84, 1954; Hopen, J. M. and Campagna, F. N., J. Phila. Gen. Hosp., March 1954, p. 20; G. J. Martin, Exp. Med. and Surg., 13, 156, 1955.

DOSAGE: 2.5 mg. (0.5 cc.) intragluteally; q. 6h. until improvement results; q. 12h. thereafter.

RECOMMENDED METHOD OF INJECTION: Very slowly intragluteally.

SUPPLIED: 5 cc. multiple-dose vials (5 mg, trypsin/cc.)

THE NATIONAL DRUG COMPANY

PRODUCT OF ORIGINAL RESEARCH BY NATIONAL DRUG

disabled worker might be more interested in a monthly pension check than in getting himself rehabilitated. Last July, in testimony before the Senate Finance Committee, Mrs. Hobby dealt with this politically dangerous subject of malingering in these words:

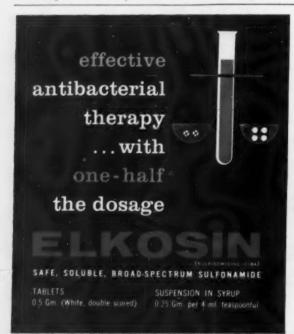
Recognizing that self-sufficiency and independence through rehabilitation are more important goals for the individual than dependence on cash payments: What are the implications of cash disability benefits with respect to rehabilitation efforts?

At that same session Mrs. Hobby pointed out that Congress last year voted a larger and more costly federal rehabilitation program. Now, she implied, the proposal is to set up monthly pensions for the disabled, pensions they will lose if

they are rehabilitated and return to employment. Under these conditions she questioned whether the new rehabilitation plan would have a fair chance to show what it can do.

Physicians and others interested in rehabilitation emphasize that a new concept of disability is being accepted: A specific disability in one trade or profession is not a disability in another, and there are progressively fewer "disabilities" that bar a handicapped person from employment.

The American Medical Association is unequivocally opposed to the disability plan, but for another reason. The AMA is convinced that basically the disability payment plan points directly toward social-



CIBA

SUMMIT, N. J.

*Elkosin maintains effective blood levels, both in urinary and systemic infections, with standard (i.e., sulfadiazine) dosage, or approximately half the dosage required with the other widely used single-soluble sulfonamide. This means extra safety, and greater convenience and economy.

2/214814



She'll enjoy this pregnancy

Fifty per cent of all pregnant women even those on a "good" prenatal diet—suffer calcium deficiency symptoms.*

New evidence shows that because of calcium-protein antagonism, calcium phosphate supplements may actually cause a deficiency, just when optimum levels are desired. And high-protein diets are also rich in calcium-draining phosphorus. Thus leg cramps are a minor symptom of major significance: they may indicate seriously low calcium.

Calcisalin, a complete prenatal supplement, containing 100% of the MDR for vitamins and iron, is also completely physiologic. Phosphate-free and phosphorus-eliminating, the calcium lactate assures readily assimilable calcium, while the aluminum hydroxide gel takes up excess dietary phosphorus without interfering with the value of other nutrients.

"Noncomplainers" consider leg cramps "normal" and complain only when cramps are severe. Thus the number of complaints does not truly reflect the higher incidence of calcium depletion. To safeguard against serious, "silent" calcium depletion, all women who enjoy a highprotein prenatal diet can benefit from Calcisalin's phosphate-free, phosphorus-eliminating properties.

Dosage: Two tablets three times daily, Available: Bottles of 100 tablets and in 8-ounce nursing bottles of 300 tablets.

> *Wolff, J. R.: Illinois M. J. <u>105</u>:6 (June) 1954.

Calcisalin°

WARNER-CHILCOTT

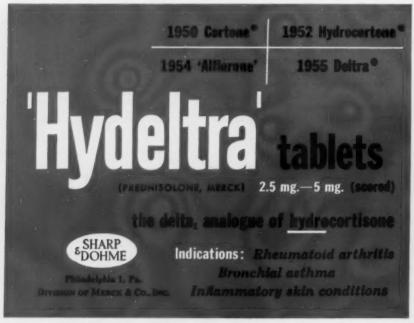
ized medicine. In the opinion of the Association, the federal government would have to set up a national "medical police force" to determine disability and to enforce compliance on the part of the medical profession.

Whether the AMA's fears are justified is open to question. However, there is no doubt about one thing: If federal money is being spent, the law will have to set up machinery to audit the spending, the way all government spending is subject to regulation and investigation.

A preview of the cash disability fight was staged in the closing weeks of the last Congress. The Democratic majority of the House Ways and Means Committee, in a display of party discipline unusual last session, reported out a cash disability bill after hearings closed to the public. The House leadership, in full sympathy with the bill, arranged for its consideration under the most favorable legislative procedure. It passed the House by an overwhelming vote.

In the Senate, Chairman Byrd of the Finance Committee put on the brakes. He said his committee would not report out the bill until

would not report out the bill until after it had conducted "full and open hearings." That was the signal for every opposition organization to demand to be heard. Senator Byrd then was able to announce that such hearings would involve 150 organizations. That courtesy could hardly be extended unless the



Gradual and sustained lowering of blood pressure:

Each tablet contains:

Reserpine 0.1 mg. or 0.25 mg. or 1.0 mg.

Supplied:

Scored tablets

0.1 and 0.25 mg, in bottles of 100 and 500 1.0 mg, in bottles of 100

The Upjohn Company, Kalamazoo, Michigan



Reserpoid

(Pure crystalline alkaloid)

Senate was willing to continue in session until Labor Day. It wasn't.

Next session the fight on this issue will open in the Byrd committee.

HILL-BURTON APPROPRIATION

This year the Hill-Burton program for federal aid to hospital construction is enjoying its biggest appropriation since 1949. Although the legal ceiling for this appropriation is \$150 million, that figure has been reached only once in the nine-year history of the project.

Other years the total has been around \$75 million. That is the figure the Administration asked for this year, and what the House voted. Senator Lister Hill, chairman of the health appropriations subcommittee

and one of the original sponsors of the bill in 1946, was responsible for the increase. He prevailed on his subcommittee to ask \$104 million, and the full committee and the Senate went along with him. The conference committee then reached a figure approximately halfway between the low House total and the high Senate total.

For its over-all operations, the Public Health Service has about 16% more money than it had last year. Increases of from half a million dollars to 2 million were voted for communicable disease and tuberculosis control work and for research on cancer, mental health, heart disease, arthritis and metabolic diseases, microbiology, and neurology and blindness.

Eventor children

To Prevent or Relieve Pain Relaxamine A-P

reduces pain perception and pain intensity

DOSAGE: Children over 8, 1 capsule. Adults 1 to 3 capsules. Repeat in 3 hrs. if necessary. ISSUED: Bottles of 30 and

100 capsules.
THE ADAMS CO.

THE ADAMS CO. PHILA. 10. PA. A Non-Narcotic Formula with Synergistic Action

The most effective analysis combination Salicylamide 2.5 gr. Phenacetin 2.5 gr.

Potentiated by the muscle relaxants
Mephenesin 375 mg.

Hamatropine methyl bromide 1.5 mg.

Assisted by the sedative action of Phenebarbital 1/4 gr.

Samples always available on request

in the anemias...

Therapeutically Unique

"...cobalt is indicated in all cases in which the slowly regenerating marrow requires a more forceful hematopoietic stimulus than is given by physiologic activators or a therapeutically elevated iron level."

-Wolff, H.: Med. Monatsschr. 5:239 (April) 1951.

"These studies show that oral cobalt therapy can stimulate erythropoiesis..."

-Gardner, F. H.: J. Lab. & Clin. Med. 41:56 (Jan.) 1953,

"Cobalt seems to stimulate...the bone marrow which undergoes progressive hyperplasia of all cellular elements with a consequent discharge of erythrocytes into the circulation."

-Kato, K.: J. Pediat. 11:385 (Sept.) 1937.

"In our series of cases, cobalt proved to be a powerful stimulant to erythropoiesis....

Rohn, R. J.; Bond, W. H., and Klotz, L. J.:
 J. Indiana State Med. Assn. 46:1253 (Dec.) 1953.

"Hematopoietic responses to therapy with cobaltous chloride, which were observed in each patient, indicate that cobaltous chloride produced an active stimulus to erythropoiesis...."

-Robinson, J. C.; et al.: New England J. M. 240:749 (May) 1949.

Roncovite has introduced a wholly new concept in the prevention and treatment of anemia. It is based on the unique hemopoietic stimulation produced only by cobalt.



The First True Hemopoietic Stimulant



in the anem RONCOVITE

G

Clinically Effective

IN INFANCY "The therapy used by us [Roncovite] was approximately equivalent in results to the transfusion of 1½ pints of blood weekly in adults."

-Rohn, R. J.; Bond, W. H., and Klotz, L. J.: J. Indiana State Med. Assn. 46:1253 (Dec.) 1953.

"Cobalt appears to be of value in the prevention of the early anemia of premature infants, and if iron is administered simultaneously the risk of an iron deficiency anemia developing from the fourth month onwards is considerably reduced."

-Coles, B. L., and James, U.: Archives of Disease in Childhood, 29:85 (April) 1954.

As compared with controls, 16 premature infants receiving Roncovite Drops showed "significantly greater values in the mean hemoglobin and hematocrit levels...

-Quilligan, J. J., Jr.: Texas St. J. Med. 50:294 (May) 1954,

IN PREGNANCY

"Evidence suggests that iron and cobalt provide the most effective hematinic for pregnant women."

-Holly, R. G.: Journal-Lancet 74:211 (June) 1954.

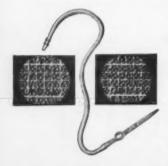
"...57 of the 58 patients (98.2 per cent) maintained or improved their hemoglobin [with Roncovite]..."

-Holly, R. G.: Obstet. & Gynecol., 5:562 (April) 1955.

IN CHRONIC LOW-GRADE INFECTIONS

"Cobalt appears to be a valuable drug in the treatment of anemias secondary to chronic diseases."

-Weinsaft, P. P., and Bernstein, L. H. T.: Amer. J. Med. Sc., Vol. 229, (Sept.) 1955.



"In all patients (chronic suppurative infection) a reticulocytosis was observed within 6 days. This was followed by increases in red-cell counts, in hemoglobin values, in blood volume and in total circulating hemoglobin.

-Robinson, J. C., et al.: New England J. M. 240:749 (1949).

RONCOVITE®

The original, clinically proved, pure cobalt-iron product.

in the anemias...

Safe Medication

IN INFANCY "There were no toxic effects in any case."

-Coles, B. L.: Archives of Disease in Childhood, 30:150 (April) 1955.

"None of them [infants] showed harmful effects despite the large doses."

-Quilligan, J. J., Jr.: Texas St. J. Med. 50:294 (May) 1954.

IN PREGNANCY "No toxic manifestations associated with its use have been observed."

-Holly, R. G.: Obstet. & Gynecol. 5:562 (April) 1955.

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IN CHRONIC LOW- "With 60 mg. (cobalt chloride) a day by mouth after GRADE INFECTIONS meals neither ourselves nor our patients experienced untoward symptoms."

> -Robinson, J. C.; James, G. W., and Kark, R. M.: New England J. Med. 240:749 (May) 1949.

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-Weinsaft, P. P., and Bernstein, L. H. T.: Amer. J. Med. Sc., Vol. 229, (Sept.) 1955.

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THE JOURNAL OF DIAGNOSIS AND TREATMENT

THE EDITOR'S PAGE

by WALTER C. ALVAREZ, Editor-in-Chief

Physicians Need More Knowledge of What is Normal

Many of the patients one sees today are being treated for a supposed chemical abnormality found by some laboratory girl. For instance, one commonly sees persons who have been told that they have anemia, and yet a good laboratory in which the hemoglobin measurement is made with an electric instrument either cannot find any sign of it, or, in the case of a woman, the reading is perhaps 13 gm. Usually this is reported as being too low, but according to a recent study, it actually represents the mode or central tendency of normal. According to Drs. W. W. Hawkins, Eirlys Speck, and Verna G. Leonard (Blood 9:999-1007, 1954), the normal modal value of hemoglobin for 1,424 women older than 20 years was 13 gm. All physicians should make note of this.

Occasionally a woman brings a report from her physician saying that he is starting treatment for anemia because her hemoglobin reading is 12 gm. But this was made with one of the cheaper hemoglobinometers with which results cannot be duplicated without an error of perhaps 10% either way. In such a case a measurement made with an electric hemoglobinometer may show a reading above 13 gm.

The consulting internist is constantly seeing women who are being treated for hypothyroidism, when only one measurement of the basal metabolic rate showed -12%. The other day I saw a woman who had been treated for hypothyroidism because one reading of basal metabolic rate had been -2%! Evidently it did not occur to the physician that with all tests there must be a considerable range of normal.

EDITORIALS

I see elderly women who are being treated for hypotension because their systolic pressure is less than 150 mm. Yet experts would tell the woman that she is a normal and unusually fortunate person.

At the age of 84, my still active and hard-working doctor father had a systolic blood pressure of 130 mm. In my 30's and early 40's, when I could easily walk 25 miles and climb a mountain or two, my systolic blood pressure was usually 100 mm. or less. Some physicians would call such a pressure pathologic, but actually it can be found in many normal and healthy people who according to statistics are headed for a long life.

Medical Information for Lay Persons

A librarian writes that in her public library she gets many applications from lay persons for information in regard to their ailments. She feels the need for booklets on the several common diseases—booklets prepared by good physicians, and all in easily understandable Anglo-Saxon speech. She suggests that medical libraries should also have such booklets available for persons who come in asking about some disease. Most medical librarians would probably prefer that the inquisitive lay person keep away from their doors, but I am sure they would do better to receive him cheerfully and to supply him with the information he craves. Naturally, this would make for much better public relations.

Of late, perhaps 50 mothers of children suffering from Hodgkin's disease have written me asking its nature: Is it cancerous? Is there any hope for a cure? Is there any new treatment on the horizon, and how long is the victim likely to live? Many of these people say that they have asked their physicians for this information but have not received it; the doctor just said that he had no time in which to stop and give a lecture on the subject.

This, of course, is understandable; but still the poor distracted widow whose only son and perhaps only support has just been told that he has Hodgkin's disease has every good reason for asking that she be given the information she so greatly wants and needs.

Myocardial Infarction after Surgery

FRED WASSERMAN, M.D., SAMUEL BELLET, M.D., AND ROBERT P. SAICHEK, M.D.

University of Pennsylvania, Philadelphia

Preexisting heart disease and hypotension during and immediately after surgery are important factors predisposing to myocardial infarction.*

Modern anesthesia, wide use of antibiotics, and improved postoperative care have increased the frequency of operations on old people and patients with heart disease. In these groups, cardiac complications before, during, and after surgery are major hazards. Postoperative myocardial infarction is of considerable importance.

Prophylactically, the cardiovascular system should be carefully evaluated, especially in patients over 50 years of age. Factors predisposing to myocardial infarction are hypertension, cardiac enlargement, previous infarction, angina pectoris, conduction defects, congestive heart failure, aortic stenosis, luetic narrowing of the coronary ostia, and coronary insufficiency of rapid tachycardias. Frequently associated with coronary artery disease are gout, xanthomatosis, and diabetes mellitus. Anemia, polycythemia, electrolyte and water imbalance, poor nutrition, infection, and disturbed emotional states also may be involved.

Some electrocardiographic changes are characteristic or suggestive of myocardial infarction. These include transmural infarction of the left ventricle with QS patterns and RS-T segment deviations in the limb and precordial leads characteristic of the sites involved; and RS-T segment deviations and inverted T waves in leads I and II and the precordial leads. The latter probably suggests subendocardial infarction that is secondary to ischemia and hypotension with or without the occlusion of a major coronary artery.

Pulmonary embolism, hypokalemia, the posttachycardia syndrome, pericardial damage, or effects of digitalis, quinidine, and vasopressors may cause similar electrocardiographic abnormalities and should be considered in differential diagnosis.

The anesthetist should use only slightly depressive medications before surgery in old people. Surgical procedures should be limited as much as possible. Postoperatively, oxygen inhalation may relieve the depressant effects of general anesthesia. Curare type drugs may increase the risks. Prolonged hypotension due to anesthesia, hemorrhage, or visceral manipulation and increased clotting tendencies en-

^{*}Postoperative myocardial infarction. New England J. Med. 252:967-974, 1955.

courage the formation of thrombi

Frequent recordings of blood pressure and pulse are important. Fluid, blood, and electrolyte balances after surgery should be carefully maintained. Early recognition and treatment of hypotension, arrhythmia, and congestive failure are mandatory. If infarction occurs, coronary care is instituted. Postoperative ambulation usually is delayed for two or three weeks after infarction.

A group of 25 patients with postoperative myocardial infarction was studied. The average age of the 10 males and 15 females was 64 years. Of the patients, 19 had preexisting hypertensive, arteriosclerotic, or rheumatic valvular heart disease; 10 of these subjects had either anginal syndrome or electrocardiographic evidence of previous infarction.

Myocardial infarction occurred in 23 patients within a week of surgery and within the second post-operative week in the remainder. Only 8 of the total group had typical, severe, constricting anterior chest pain; 3 persons had neither pain nor hypotension. Of the total group, 5 patients died, 3 as a direct result of infarction and 2 as a result of coexistent disease.

Extrapulmonary Suppurative Tuberculous Lesions

GEORGE N. HAZLEHURST, NEW YORK UNIVERSITY, NEW YORK CITY, reports that extrapulmonary suppurative tuberculous lesions are effectively treated by local application of streptococcal concentrates of streptokinase and streptodornase.

A jelly vehicle consisting of gum tragacanth and sodium alginate in isotonic Sorensen's buffer is adjusted to pH 7.5 and sterilized by autoclaving. Then 1 ampule, containing 150,000 to 300,000 units of streptokinase and 75,000 to 250,000 units of streptodornase, is dissolved in 0.5 cc. of saline and added to 30 cc. of the jelly. A small amount of this preparation is applied daily to the open ulcer, and the area is covered by a bleb of paraffin paper to prevent absorption of the jelly by the gauze dressing. Adequate drainage of the treated lesion, either by incision and drainage or by needle aspiration, prevents significant toxic reactions.

Antituberculous drugs should be administered concomitantly when active tuberculosis exists deep in the tissues surrounding the node.

Enzyme therapy was effective in healing 17 suppurative tuberculous lymph nodes in 11 patients. In addition, 3 patients with other types of extrapulmonary suppurative disease were successfully treated by irrigation with enzyme solutions.

Streptokinase-streptodornase in the local treatment of suppurative extrapulmonary tuberculosis. Am. Rev. Tuberc. 71:1-11, 1955.

Caval Ligation in Heart Failure

J. BERNATH, M.D., R. GUILLEMOT, M.D., P. SAMUEL, M.D., AND R. HEIM DE BALSAC, M.D. Broussais-la-Charité Hospital, Paris

Ligation of the inferior vena cava may provide satisfactory palliation in patients with intractable cardiac insufficiency.*

With increasing experience, the operative mortality of ligation of the inferior vena cava has been lowered from 20 to less than 7%.

The chief indications for the operation are mitral disease and combined mitral and aortic disease with intractable congestive failure. Other reasons are cardiopathy without valvular lesions and hypertensive cardiovascular disease.

The procedure is not advisable in cases of high output failure, such as chronic cor pulmonale and thyrotoxicosis, or in valvular lesions with severe restriction of the circulation as seen in advanced aortic stenosis. The procedure should not be done when cardiac disease is progressive.

Preoperative care should include a concerted effort to improve the patient's status. The heart rhythm should be slowed and effusions removed. Cardiotonics, restriction of sodium, mercurial diuretics, sedatives, and oxygen therapy should be utilized systematically.

Improvement is noted immediately after operation with impres-

sive relief of respiratory symptoms, regression of hepatomegaly, and disappearance of peripheral edema. Duration of improvement is dependent upon cooperation of the patient in adhering to a cardiac diet and regimen, changes in the nature of heart disease, liver function, preoperative renal function, and the rapidity of collateral circulation development. When collateral circulation is established, cardiac insufficiency reappears and the patient returns to the status existing before surgery. Postoperative complications are frequent and include edema of the legs. Retroperitoneal hematoma is common.

Mortality during the first postoperative year is partly due to a continuation of cardiac degeneration and to vascular accidents. More than three-fourths of patients who survive the first year remain in good condition during the second year. A few, however, present symptoms or signs of cardiac insufficiency with chronic coughs, choking sensations, edema, and cardiac irregularities. These difficulties occur particularly when the prescribed diet is abandoned or physical exertion is unusual. The mortality rate does not exceed 6% during the second year and remains relatively low after four years.

^{*}Vena cava inferior ligation in congestive heart failure. Am. Heart J. 50:112-128, 1955.

Management of Chronic Renal Failure

DAVID C. HUMPHREY, M.D. Cleveland Clinic

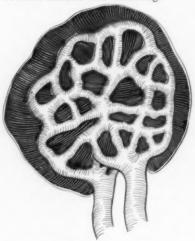
Therapy of chronic renal disease may provide symptomatic relief, stabilize renal function, and, occasionally, arrest or reverse the progress of the renal lesion.*

Objectives of treatment of chronic renal failure are to reduce accumulation of protein catabolites and to prevent disorders in fluid and electrolyte disturbances that produce signs and symptoms of uremia. Deficits generally controlled by the kidney must be corrected.

Any complications that aggravate renal failure must be treated. Mechanical obstruction should be searched for and removed. Pyelonephritis or other urinary tract infection requires chemotherapy. Hypotensive agents may be beneficial, but rapid lowering of pressure decreases renal blood flow and produces further renal damage. Other causes of decreased renal blood flow amenable to treatment include congestive heart failure, severe emesis or diarrhea, diabetic acidosis, intestinal obstruction, and shock.

Retention of protein catabolites is prevented by restricting protein in the diet. The patient should receive 2,000 to 3,000 calories daily.

Fat and carbohydrate, which are oxidized to water and carbon dioxide and excreted by extrarenal routes, compensate for the low protein intake. Fat and sugar emulsions such as Lipomul-Oral or Ediol may be used as caloric supplements. Tube feeding with a fat and sugar mixture may be helpful, but parenteral alimentation with glucose or fructose is generally preferred. Chlorpromazine is used to combat nausea and vomiting.



A glomerular unit

Fluid and electrolyte therapy must be individualized. Persons with renal failure require a larger urinary volume than healthy people. Polyuria may cause dehydration unless water intake of up to 3,000 cc. daily is maintained. How-

^{*}Treatment of chronic renal failure. M. Clin. North America 29:1035-1040, 1955.

ever, if filtration is reduced and the filtrate is entirely absorbed, water must be restricted as in acute renal failure. When parenteral fluid is needed, 5% glucose in water is recommended.

Electrolyte loss in excess of the relative loss of water is produced by diminished tubular reabsorption of sodium in chronic renal failure and is aggravated by vomiting, diarrhea, limitation of sodium in diet, use of diuretics, and parenteral administration of glucose solutions. As a compensatory mechanism, extracellular water enters the body cells and the decreased amount of extracellular fluid further reduces renal blood flow. Sodium salts should be prescribed.

If glomerular filtration of sodium decreases, intake should be restricted or the element will shift into the cells and displace potassium into the extracellular space. Thus, depending on renal function, either potassium is lost in the urine and hypokalemia ensues or potassium is retained and hyperkalemia

develops.

Hyperkalemia is seen most commonly with water deficit. Hyperkalemia can be treated by glucose and insulin, or by sodium-cycle carboxylic resin when serum concentrations are dangerously high. Hypokalemia is due to excess renal loss and responds well to carefully determined replacement therapy.

Chronic renal failure may cause retention of phosphate. The element can be precipitated in the intestine by administration of 20 cc. of aluminum hydroxide gel three to four times daily. Decrease

in ionized calcium stimulates the parathyroid glands with resultant decalcification manifested by muscular twitching and, occasionally, convulsions. Intravenous calcium gluconate relieves twitching.

Acidosis and dehydration occur because the kidney cannot reabsorb base or excrete ammonia and because sulfate and phosphate are retained. Correction requires replacement of electrolytes and water.

Sodium bicarbonate or sodium lactate can be given orally or parenterally. The sodium deficit is seldom more than 1 gm. of sodium bicarbonate per kilogram of body weight. The amount of bicarbonate in grams to be given is $0.7 \times \text{body}$ weight (kilogram) × plasma bicarbonate deficit (mEq./L.) \times 0.084. When lactate is used, 0.112 is substituted for 0.084.

Symptomatic therapy is also necessary. Transfusions should be given to anemic persons when the hemoglobin falls below 7 or 8 gm. Convulsions are often related to hypertensive encephalopathy and are controlled by antipressor agents and intravenous barbiturates.

Pruritus can be treated with calcium gluconate, intramuscular testosterone, oral ergotamine tartrate, or Thorazine. Opiates stop uremic diarrhea and laxatives or enemas are effective for constipation. Magnesium laxatives should be avoided.

Use of an artificial kidney is justified when urinary flow of a patient with a reasonable life expectancy is suddenly suppressed. Peritoneal irrigation should be considered when an artificial kidney is not available.

Therapy for Cirrhosis of the Liver

CHARLES S. DAVIDSON, M.D. Boston City Hospital

The goals of medical management of hepatic cirrhosis are the elimination of necrosis and fatty infiltration and the regeneration of liver tissue.*

CHRONIC malnutrition, particularly of protein and possibly of choline and methionine, is an important factor in the genesis of active and chronic liver disease in man. Dietary treatment should provide sufficient nutrients to improve nutritional status and also to repair the deficiencies that lead to fatty infiltration, necrosis, and parenchymal disorganization of hepatic cells. The diet should supply enough protein to allow positive nitrogen balance and sufficient calories to permit proper utilization of other nutrients. Alcohol is absolutely interdicted when implicated.

A satisfactory diet supplies 2,000 to 2,500 calories daily, with 70 to 100 gm. of protein, sufficient fat for palatability, and adequate B vitamins. The patient must eat all of the diet unless ascites formation restricts sodium, hepatic coma limits protein, or massive gastrointestinal bleeding necessitates elimination of all food.

Although patients with liver disease have many abnormalities of intermediary metabolism, a positive nitrogen balance can usually be maintained. The defects in metabolism limit the speed of regaining normal nutrition, but most patients with an adequate diet over a long period of time show gradual nutritional improvement, providing activity of the disease process has ceased.

Abdominal paracentesis is seldom necessary for relief of ascites and edema and should be avoided if possible, since large amounts of protein and electrolytes are lost from the body. Restriction of sodium intake to approximately 200 mg. daily usually halts ascites formation. Occasionally, diuresis and disappearance of ascites and edema will be prompt. However, diuresis is usually gradual and prolonged. Hyponatremia may occur with ascites but usually remits spontaneously as diuresis progresses.

Massive upper gastrointestinal hemorrhage is the most frequent of the fatal complications of hepatic cirrhosis. Accurate diagnosis of the source of the hemorrhage is essential for rational therapy. Patients may bleed from peptic ulcer, gastritis, or ruptured esophageal vari-

ces.

As soon as blood is replaced and the patient's condition is stabilized, the esophagus and stomach are examined roentgenographically with thin barium. Esophagoscopic study

^{*}Medical management of cirrhosis of the liver. J. Chron. Dis. 2:55-69, 1955.

may be performed even during active bleeding, usually with the patient in bed.

Adequate blood replacement and maintenence of fluid and electrolyte balance are essential. Bleeding from varices may be temporarily stopped with balloon tamponade. Transesophageal ligation of the varices is done to control bleeding and prevent immediate recurrence. The advisability of portacaval anastomosis to reduce portal hypertension is then considered.

Hepatic coma is the most common terminal event in cirrhosis and may be precipitated in susceptible individuals by operation, paracentesis, administration of ammonium salts, high-protein diet, and injudicious use of analgesics and sedatives such as morphine and paraldehyde. Management requires limitation of protein and meticulous maintenance of fluid and electrolyte balance. Special measures include use of intravenous hypertonic glucose, intravenous sodium glutamate, steroids, and tetracycline antibiotics.

Since most patients with hepatic cirrhosis are chronic alcoholics, psychologic treatment and support are integral parts of management.

Recording Cardiac Murmurs

ROBERT F. RUSHMER, M.D., ROBERT A. TIDWELL, M.D., AND RICHARD M. ELLIS, UNIVERSITY OF WASHINGTON, SEATTLE, describe sonvelography, direct recording of the intensity of heart sounds. The method facilitates diagnosis of heart disease by detecting low-frequency murmurs not heard during auscultation and can also be used as a guide in auscultation for murmurs that are just above the level of audibility. Routine electrocardiographic examinations may be made simultaneously.

A microphone placed on the precordium responds to sound vibrations by emitting a fluctuating electrical voltage which is amplified and recorded as the standard type of stethogram. The signal is rectified so that all deflections have the same polarity. A filtering circuit of about 0.03-second time constant prevents the galvanometer from returning to the base line between deflections. Thus, an envelope of sound vibrations is produced on a low-frequency galvanometer by rectifying and filtering the original signal so that the sound intensity is recorded as a continuous line which connects the peaks of each deflection.

The sonvelograph records the intensity but not the frequency of a sound. Therefore, conservative interpretation of deflections is essential until criteria for inaudible vibrations of the heart are definitely established.

Sonvelographic recording of murmurs during acute myocarditis. Am. Heart J. 48:835-846, 1954.

Jaundice from Chlorpromazine

E. R. MOVITT, M.D., AND M. J. GOLDMAN, M.D.

Veterans Administration Hospital, Oakland, Calif.

M. A. MEYER, M.D. Berkeley, Calif.

A. M. SNELL, M.D.
Palo Alto Clinic, Palo Alto, Calif.

MAJ. J. R. GIBSON, COL. B. H. SULLIVAN, JR., AND CAPT. J. G. WEBSTER, M.C., U.S.A. Letterman Hospital, San Francisco

R. B. STONE, M.D. Oakland, Calif.

The possibility of chlorpromazineinduced jaundice should be considered in patients with icterus.*

Because chlorpromazine is used so extensively for the treatment of psychiatric conditions and as an antiemetic, sedative, and analgesic, the possibility of a hepatotoxic action should not be neglected.

Usually the patient with chlorpromazine jaundice is not very ill, although pyrexia may occur with or precede the onset of icterus. Other symptoms include nausea, vomiting, diarrhea, malaise, muscular aching, and loss of weight. Anorexia is common, although some patients have ravenous appetites. Pruritus occurs occasionally and may precede the onset of icterus. The liver is usually enlarged, and splenomegaly may also be noted.

The disease may be observed some time after chlorpromazine therapy has been discontinued. Jaundice may last from a few days to as long as ten weeks. Liver injury is apparently more common with oral than with parenteral administration of the drug. No clear relationship of icterus to amount of dosage has been established.

The results of liver function tests in chlorpromazine jaundice are similar to those obtained in patients with obstructive jaundice. Bilirubinemia, an elevated serum alkaline phosphatase, and occasionally a high total serum cholesterol value with decrease in esters are noted. Bromsulphalein retention may occur even without icterus.

Formation of bile plugs in the biliary canaliculi, revealed by liver biopsies made either surgically or by needle, is the most prominent and common feature. The plugs occur mostly in the centrolobular zones, usually with brownish pigment deposition in the surrounding parenchymal cells. Spotty infiltration with inflammatory cells within the liver lobules may be noted in some cases. Occasionally a few periportal polygonal cells show degeneration. Portal areas, when involved, may exhibit infiltration with neutrophils, eosinophils, lymphocytes, and mononuclear cells. In some instances the process may surround the bile ducts within the

^{*}Jaundice associated with the administration of chlorpromazine, SKF-2601-A (Thorazine). Gastroenterology 28:901-913, 1955.

portal tracts and extend for a short distance into the adjacent parenchyma. The bile ducts are not dilated within the portal spaces. Eosinophils in the inflammatory exudate may be an indication of drug induced liver injury.

Since functional hepatic impairment without jaundice may be associated with chlorpromazine therapy, liver function tests may be advisable for all patients who have received the drug for long periods of time.

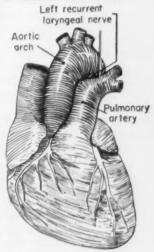
Etiology of Hoarseness with Mitral Stenosis

RECEP ARI, M.D., W. PROCTOR HARVEY, M.D., AND CHARLES A. HUFNAGEL, M.D., GEORGETOWN UNIVERSITY, WASHINGTON, D. C., believe that compression of the left recurrent laryngeal nerve between a dilated pulmonary artery and the aorta (see illustration) is the principal cause of hoarseness in patients with mitral stenosis.

Occurrence of left recurrent laryngeal nerve paralysis associated with mitral stenosis is an added indication for valve surgery. Operation should be done early before the nerve has been permanently damaged. If done in time, voice function improves after mitral commissurotomy.

Because the anatomy of the region may be different in each case, the structural conditions required to produce compression of the nerve may also differ. An extremely enlarged pulmonary artery may not cause paralysis in one instance, and yet, in another, a scarcely demonstrable enlargement may do so. Location of the ligamentum arteriosum which forms a triangle with the aortic arch and pulmonary artery may prevent the nerve from slipping away when pressure is exerted.

Data from postmortem examinations support the theory that enlargement of the pulmonary artery is the main causative factor in compression



Compression of laryngeal

Recurrent laryngeal nerve paralysis occurs with types of heart disease other than mitral stenosis. Patent ductus arteriosus, interatrial septal defects, and Eisenmenger syndrome are congenital lesions that have been associated with this type of paralysis.

Etiology of hoarseness associated with mitral stenosis: improvement following mitral surgery. Am. Heart J. 50:153-160, 1955.

Lesions of the Foot with Diabetes

DAVID HURWITZ, M.D. Boston City Hospital

Antibiotics, good diabetic management, and judicious surgery have greatly altered the treatment of foot lesions that complicate diabetes.*

Conservative treatment with frequent drainage of infected areas is recommended for diabetic patients with foot lesions. Prolonged hospitalization may be necessary, but major amputation is often avoided.

Gangrene may be controlled by conservative management with minor amputations. However, results are less favorable than when infection is the predominant factor.

All patients with foot infections, even if the lesion is slight, should be hospitalized and examined completely to detect other complications. A high-protein diet is prescribed.

Since good control of diabetes is essential, the urine should be as close to sugar-free as possible without provoking hypoglycemia. The patient often requires much more than the usual dose of insulin when infection occurs.

Cultures and sensitivity studies are obtained from the infected areas and appropriate antibiotics are given. If the lesion is not open, 600,000 to 1,000,000 units of penicillin should be given daily.

Infected areas should be drained

widely within twenty-four hours of admission. Local accumulations of pus can be drained early as are comparable lesions of nondiabetic persons, because spread of infection is rare after antibiotic therapy is begun.

After initial drainage, the foot is inspected every day since other pockets are often detected. Several trips to the operating room for incision and drainage may be necessary. Sometimes one or more digits or metatarsals must be removed because of osteomyelitis and to establish adequate drainage. After slough is removed and the infection has subsided, healing is often rapid.

High amputations are not done for infections of the feet unless conservative treatment has been tried for two weeks and then are rarely necessary.

Gangrene must be differentiated from necrotic slough caused by infection. Excision of a toe may be adequate for persons with gangrene, but a transmetatarsal or a higher amputation is frequently required. A high amputation should be below the knee if the patient has good popliteal pulsations and can use a prosthesis.

Lumbar sympathectomy is not recommended as a routine procedure for foot lesions associated with diabetic arteriosclerotic disease.

^{*}Management of lesions of the feet in diabetes. Diabetes 4:107-109, 1955.

Tetanus Prophylaxis and Treatment

NORMAN A. CHRISTENSEN, M.D. Mayo Clinic, Rochester, Minn.

Antibiotics destroy Clostridium tetani, but no method of reversing the disease after the exotoxin becomes fixed to nerve tissue is known; therefore, toxoid prophylaxis is desirable for the entire population.*

Reactions to tetanus toxoid are rare and a high degree of protection is conferred. Threat of war is another factor that makes tetanus immunization of all persons advisable. A patient with active immunity is spared the danger of horse serum reactions, which may be fatal, should wounds require treatment.

Alum-precipitated toxoid provokes a superior initial antigenic response. Fluid toxoid, causing a more prompt increase in agglutinin titer, is preferred for booster injections.

Treatment of tetanus, a complication of clostridial infection of a wound, is less successful than prophylaxis. If the wound is slight, the infection is usually easily treated, but as soon as a patient has symptoms, the union of toxin and nerve tissue is irreversible and oxidation of the combined toxin cannot be speeded.

However, if less than a lethal dose of toxin is combined with the tissue, an adequately treated patient is likely to recover. Death is least likely if the incubation period is longer than twelve to fourteen days. Morbidity, regardless of severity of illness, lasts three to five weeks, with prognosis improving after the tenth day. If the patient lives four-teen days after symptoms occur, chances for complete recovery are excellent.

Diagnosis is based on signs and symptoms. Cultures are slow and are helpful in only 25 to 50% of instances.

The patient should be hospitalized.

After a test for hypersensitivity is made, 15,000 to 30,000 units of tetanus antitoxin intravenously or 10,000 to 30,000 units intramuscularly or both are injected. The larger amounts are used for deep, penetrating, or badly infected wounds or when symptoms are advanced or rapidly progressive. Smaller doses are given for a few days until the focus of infection is removed and the disease stabilizes.

When the antitoxin is given, epinephrine, oxygen, and fluids should be immediately available for anaphylactic shock. Oral Benadryl or Pyribenzamine, 25 to 100 mg. depending on age every four to six hours, also prevents or suppresses serum reactions.

A rectal retention enema of

^{*}A practical approach to the treatment of tetanus. Minnesota Med. 38:397-400, 1955.

Avertin, in doses of 50 to 70 mg, per kilogram of body weight depending on the patient's age and the severity of the disease, controls spasm and provides three to six hours of sleep. The patient may receive 1 to 3 injections per twenty-four hours.

Codeine and Demerol relieve pain and potentiate the sedative. Respiratory depressants such as morphine should not be used.

Penicillin, 1,000,000 units, with 1 to 2 gm. of dihydrostreptomycin may prevent production of more exotoxin by eradicating infection and also provides pneumonia prophylaxis. Smaller doses are administered to children.

Wounds are debrided after antitoxin and antibiotics are administered. For general anesthesia, intravenous Pentothal or rectal Avertin is preferred to ether, which may increase laryngospasm. A moist potassium dichromate dressing is the least irritating oxidizing agent.

Tracheotomy may be needed for laryngospasm or when secretions accumulate. A high-caloric diet of soft foods in multiple small feedings is recommended when metabolism is accelerated. Oxygen and a portable respirator may be needed. Urinary retention is relieved.

Therapy with cortisone, hydrocortisone, or ACTH allows administration of tetanus antitoxin to hypersensitive patients. When death from exhaustion threatens, 100 to 300 mg. of cortisone may be given daily in divided doses intramuscularly or, preferably, by mouth. The dose is gradually reduced.

Primary causes of death are circulatory failure; asphyxia due to spasm of the glottis, diaphragm, and intercostal muscles; and exhaustion. Pneumonia, cerebral edema, oversedation, excessive use of muscle-relaxing drugs, and serum reactions contribute to fatality.

Internists, neurologists, orthopedists, anesthesiologists, pediatricians, plastic surgeons, pathologists, and bacteriologists should cooperate in the management of patients with tetanus. The tetanus mortality rate was reduced from 52 to 27% at the Mayo Clinic after 1945 when a tetanus team was formed.

¶ INDUCED OR SPONTANEOUS HYPOTENSION may cause cerebral complications, including reversible functional disturbances, localized infarction, and permanent dysfunction of the higher cerebral centers. Joseph F. Fazekas, M.D., Jack Kleh, M.D., and Alvin E. Parrish, M.D., of the District of Columbia General Hospital, Washington, D. C., find that symptoms of cerebral vascular insufficiency occur at variable arterial pressures, but that the level is highest among patients with cerebral vascular disease. Determining the cause of the complication may be difficult among patients receiving hypotensive agents because effects of progressive vascular disease and hypotension are similar.

Ann. Int. Med. 43:165-172, 1955.

Management of Hyperthyroidism

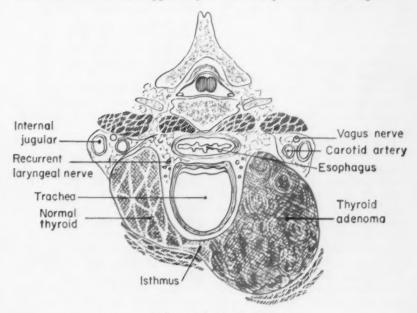
IRA A. FERGUSON, M.D. Emory University, Atlanta

Choice of antithyroid drugs, subtotal thyroidectomy, or radioactive iodine for treatment of thyrotoxicosis depends primarily on the degree of hormone production, the character of the gland, and the operability of the patient.*

In evaluating and selecting therapy for thyrotoxicosis, the physician must recognize the character of the condition. The disease apparently

is becoming attenuated, crises are seldom encountered, and critically ill patients are rare. The course characteristically is chronic and usually continuously progressive, but remissions independent of therapeutic measures do occur. Occasionally, all active manifestations of the disease permanently disappear without treatment.

Thyroidectomy is preferred treatment for all patients with thyrotoxicosis except those with slight dis-



Adenoma of the thyroid

^{*}Present status of treatment of hyperthyroidism. South. M. J. 48:763-766, 1955.

ease that may be controlled with medical management. The mortality rate after surgery in euthyroid patients is 0.2%, and postoperative complications occur in about 2%. Therapy with radioactive iodine is reserved for [1] aged patients, [2] recurrent postoperative thyrotoxicosis, [3] severe concurrent disease, [4] disease uncontrolled by antithyroid drugs, and [5] patients who refuse surgery.

Over 90% of patients with thyrotoxicosis are benefited by antithyroid drugs, but only about half remain well. Relapse rates are higher after a second course of treat-

ment.

Individuals with only moderate, diffuse enlargement of the gland are most likely to be cured with medical management, but permanent cures cannot be predicted reliably. Antithyroid drugs may be tried for a three-month period, and, if disease is controlled, treatment is stopped and the patient is observed for recurrence. If the disease reappears, preparation for surgery is begun.

Toxic nodular goiter should always be treated surgically, because response to drugs or radioactive iodine is sluggish and large doses are required; toxic manifestations are correspondingly increased; and dangers of tracheal compression, nerve pressure, neck deformity, and thyroid cancer persist even when results of medical treatment are considered good. However, the response of patients to surgery is uniformly satisfactory, and recurrence of goiter is rare.

Antithyroid drugs should be used

in preparation for surgery. This includes [1] administration of Tapazole, 30 to 120 mg. daily in 3 equal doses; [2] daily observation for toxic manifestations; [3] bed rest; and [4] high-protein and high-carbohydrate diet. In addition, for patients with severe toxicosis, large or nodular thyroids, or obstructive symptoms, Lugol's solution, 5 drops daily, is administered at the end of four weeks of treatment with Tapazole.

If disease is not sufficiently controlled by these methods, ACTH is administered a few days preoperatively and continued through the stress period.

Tapazole is preferred to propylthiouracil because a smaller dose effects a more rapid response and toxic reactions are fewer.

Complications of surgery include temporary hypothyroidism, unilateral vocal cord paralysis, and transient tetany.

Complications of medical treatment are increased exophthalmus, enlarged gland size, and toxic manifestations.

Radioactive iodine is preferred for poor operative risks and post-operative recurrent disease. The possible carcinogenic effect of I₁₃₁ is not an important deterrent, since the isotope has a short half-life and a limited area of penetration. However, the isotope should not be used for nodular goiter where a large dose is required and cancer may arise in remaining nodules.

Iodine therapy may cause hypothyroidism, produce crises with uncontrolled disease, and aggravate

exophthalmos.

Penetrating Heart Wounds

DENTON A. COOLEY, M.D., J. RALPH DUNN, M.D., H. LE ROY BROCKMAN, M.D., AND MICHAEL E. DE BAKEY, M.D.

Baylor University and Jefferson Davis, Veterans Administration, and Methodist hospitals, Houston

Conservative management of penetrating heart wounds offers the patient the best chance to live.*

Nor all patients with cardiac wounds die, but the usual causes for death are blood loss from the wound or accumulation of blood in the pericardial sac resulting in cardiac tamponade and circulatory failure.

If hemorrhage is massive, the patient may not live long enough to obtain medical help, but if the patient survives the first thirty minutes after injury, recovery may be possible. Surgery should be done immediately when transfusions cannot replace blood loss rapidly enough, but the mortality with cardiorrhaphy is about 50%.

Controlled experimental studies suggest that when cardiac tamponade is induced by instilling saline solution into the pericardial sac, aspiration of as little as 5 to 10 cc. improves the circulation immediately; similarly, transfusions exert a favorable effect on cardiac output. Alternating positive-negative pulmonary insufflation is better tolerated than alternating positive pressure alone. Such vasoconstric-

tor drugs as norepinephrine produce only a temporary beneficial effect; barbiturates appear to reduce the tolerance to positive pressure anesthesia.

Aspiration is done immediately through the left fifth parasternal intercostal space in patients with signs of cardiac tamponade. If signs of tamponade recur, aspiration is repeated. If the aspirated blood does not clot, the blood is presumably from the pericardial sac. If coagulum forms, the blood is probably from a cardiac chamber. Infusions of glucose solution containing norepinephrine are given cautiously to raise blood pressure above 80 mm. If after several taps and continued blood replacement the patient does not improve, thoracotomy is done and cardiorrhaphy attempted.

Of 57 patients with cardiac wounds, 28 were treated by pericardicentesis; 3 of these patients died. Of 14 patients treated by cardiorrhaphy, 7 died. No treatment was given to 15 patients who died less than ten minutes after arrival at the hospital. Of the 7 patients who survived operation, exploration revealed that the laceration had become sealed in 4.

*Treatment of penetrating wounds of the heart: experimental and clinical observations, Surgery 37:882-889, 1955.

Surgery for Portal Hypertension

CORNELIUS E. SEDGWICK, M.D., AND CHARLES M. PARRISH, M.D. Lahey Clinic, Boston

A venovenous shunt is often the best treatment for bleeding esophageal varices associated with portal hypertension in patients with cirrhosis.*

Most patients with esophageal varices, portal hypertension, and cirrhosis of the liver die within a year after the first bleeding episode. Not infrequently, varices become a dangerous factor in cirrhosis long before liver function is seriously impaired, and thus bleeding may constitute the main threat to the patient's life.

About 80% of esophageal var-

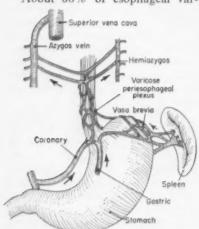


Fig. 1. Natural compensatory portacaval shunts

ices are associated with cirrhosis of the liver. Gradual obstruction to portal venous return leads to dilatation and finally reverse flow in the valveless portal venous system. Esophageal varices are one of the collateral portal-systemic linking the vasa brevia and the left gastric veins of the portal system with the azygos and hemiazygos veins of the systemic network. The natural compensatory portacaval shunts are not sufficient to lower portal pressure and prevent esophageal hemorrhage (Fig. 1). Surgical methods are directed to providing a larger diversion of portal blood.

Surgical intervention in patients with cirrhotic portal hypertension should include only those patients with previous bleeding from esophageal varices. Patients with esophageal bleeding but without ascites constitute the most favorable surgical group. The mortality associated with chronic ascites, a sign of advanced hepatic impairment, is usually prohibitive.

Liver function tests are helpful in choosing tolerable surgical risks for the shunt procedure. Serum albumin should be over 3 gm. per 100 cc., bromsulphalein retention under 15%, prothrombin time 60% or greater, and the cephalin flocculation only 1 or 2+.

The treatment of bleeding esoph-

Portal hypertension. S. Clin. North America 35:667-678, 1955.

ageal varices by omentopexy, splenectomy, or ligation of the coronary veins has been largely abandoned. Transesophageal ligation of varices is an emergency procedure only; for most of these patients, balloon tamponade and blood transfusions suffice.

The success of a venovenous shunt for bleeding esophageal varices depends entirely on reduction of portal pressure. The choice of a shunt operation depends to some extent on portal venous anatomy; the shunt must be of adequate size and must remain open. The portal and splenic veins are usually of sufficient caliber to insure a high degree of success, whereas lesser veins usually do not provide an adequate bypass.

The best exposure for a portocaval shunt is obtained with a long, oblique thoracoabdominal incision with the patient in a semilateral position. The diaphragm is divided, and the lung and liver are packed upward. The inferior vena cava is exposed at about the level of the renal veins. The portal vein is then identified and mobilized. Anastomosis is best made with interrupted everted sutures of No. 00000 Deknatel silk.

The portal vein sutured in an



Fig. 2. End-to-side anastomosis of portal vein to inferior vena cava

end-to-side manner to the inferior vena cava has many advantages (Fig. 2).

The vessels are large and sturdy and accept sutures well. No collateral vessels are disturbed. The procedure is technically easier than the splenorenal operation. Care must be exercised to avoid injury to the bile duct in dissecting the vascular gastrohepatic region.

Postoperative care includes prevention of distention and of reaccumulation of fluid. Terramycin is given for five or six days after surgery to prevent infection. Nourishment by mouth is encouraged.

¶ SUPRACLAVICULAR BIOPSY should be done when bronchogenic carcinoma is suspected, even if nodes are not palpable. Pathologic study and bacteriologic examination of the prescalene fat pad and the nodes should be made. Edward F. Skinner, M.D., and associates of the University of Tennessee, Memphis, obtained positive results in 43 of 100 patients with suspected bronchogenic carcinoma; nodes were not palpable in 18 of the 43 subjects.

Am. Surgeon 21:590-600, 1955.

Patent Ductus with Hypertension

WILLIAM WHITAKER, M.D., DONALD HEATH, M.D., AND JAMES W. BROWN, M.D.

City General and Royal hospitals, Sheffield, England

Surgical closure of patent ductus arteriosus with pulmonary hypertension is unsafe if the patient has generalized cyanosis; in other instances, treatment depends upon evaluation of the patient at surgery.*

Severe pulmonary hypertension associated with patent ductus arteriosus may be a primary disease rather than secondary to increased pulmonary blood flow through the patent ductus. The combination should be considered in the differential diagnosis when a patient has signs of pulmonary hypertension.

Exertional dyspnea, frequent upper respiratory infections, hemoptysis, and intermittent cyanosis are common features of the entity. Cyanosis confined to the legs is a specific sign of patent ductus arteriosus with pulmonary hypertension and may be exaggerated if aortic coarctation is associated.

Right ventricular dominance is usually revealed by electrocardiographic and radiologic studies. Angiocardiographic films made two or three seconds after injection of contrast medium show simultaneous filling of the pulmonary arteries and the descending aorta with no dye in the ascending aorta.

Cardiac catheterization is the

most important diagnostic study. The catheter can generally be passed through the ductus into the descending aorta, probably because the ductus is large and the blood flow is predominantly from pulmonary artery to descending aorta. Without catheterization and angiocardiographic studies, the combination entity cannot be differentiated from the Eisenmenger complex, atrial or ventricular septal defects with pulmonary hypertension, and mitral stenosis with increased pulmonary pressure.

Determination of oxygen content in blood samples is also helpful. When the shunt is not completely reversed, oxygen saturation is higher in the pulmonary artery than in the right ventricle. With a reversed shunt, oxygen content in arterial blood from the lower extremities is less than in blood from the arms.

Surgical closure of the ductus is hazardous since pulmonary pressure may increase still more. If the pulmonary arterial pressure decreases after digital compression of the ductus for fifteen minutes or so, ligation is safe. If pressure increases during trial occlusion, closure may be fatal. Patients with generalized cyanosis and a predominant shunt from pulmonary artery to the aorta are not suitable.

Patent ductus arteriosus with pulmonary hypertension. Brit. Heart J. 17:121-137, 1955.

Valvotomy for Pulmonary Stenosis

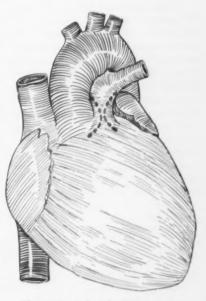
MAURICE CAMPBELL, M.B., AND SIR RUSSELL BROCK, M.B. Guy's Hospital, London

Good results can be expected when pulmonary valvotomy is employed for simple pulmonary stenosis with a closed ventricular septum.*

ALTHOUGH many patients with simple pulmonary stenosis do not need corrective surgery, the cardiac status of those with right ventricular pressures of 100 mm. Hg or more may be expected to improve considerably after pulmonary valvotomy. The operation is not hazardous when done before symptoms become too severe.

The disease has no predilection for either sex. Most cases are seen in patients between the ages of 5 and 29 years.

Not all patients with simple pulmonary stenosis have cyanosis or lessened capacities for activity. However, the right ventricular pressure may nevertheless be high and surgery will be advisable for relief. Evaluation of the result will depend upon initial indications, but since the elevation in the right ventricular pressure is a reflection of the degree of pulmonary stenosis, measurement of right ventricular pressures before, during, and after surgery is probably the most objective test of success or failure. The right ventricular pressure falls to about one-half or one-third of



Narrowing of pulmonary artery

preoperative levels in all patients. When other cardiac defects are not associated and no fibrosis or narrowing of the valve has occurred, improvement that should last indefinitely may be expected.

Detailed observation studies were made of 58 patients, 25 cyanotic and 33 acyanotic. Of the 25 cyanotic patients, 7 died after surgery. The surviving 18 patients had good results. Capacity for activity greatly increased and color was improved. The heart became smaller

The results of valvotomy for simple pulmonary stenosis. Brit. Heart J. 17:229-246, 1955.

in 10 patients, and in 9 patients whose right ventricular pressures were measured before surgery, a fall of the pressure to nearly one-half of the preoperative levels was observed.

In the acyanotic group, 32 of the 33 patients survived surgery. Not all patients in this group had symptoms severe enough to warrant operation, but right ventricular pressures over 100 mm. Hg were noted in all. All but 4 of the patients derived benefit from the procedure. The cause for failure in 4 patients was not apparent.

When preoperative arterial saturations were above 70%, the postoperative levels were always within normal range. Polycythemia and increased hemoglobin levels associated with cyanosis also fell to normal range after surgery. Because of the decrease in right ventricular pressure after surgery, enlarged hearts became smaller postoperatively. In patients with poor results, heart size was noted to increase after six months to one year.

Electrocardiographic changes noted with pulmonary stenosis were reversed after surgery. T-wave inversion with severe pulmonary stenosis was observed in 31 patients; in 26 of these the abnormal pattern improved within six months. Patients who did not obtain good results after surgery also failed to show electrocardiographic signs of improvement.

Mortality from Appendicitis

JAMES R. CANTRELL, M.D., AND EDWARD S. STAFFORD, M.D., JOHNS HOPKINS UNIVERSITY, BALTIMORE, state that the residual mortality from appendicitis is determined by the incidence of perforation, since death rarely occurs with unperforated appendicitis. Reduction of mortality therefore depends primarily on prevention of perforation, since early operation after perforation is not adequate. This in turn depends on educating laymen to seek early treatment and physicians to operate early if appendicitis is suspected.

The use of fluid and electrolytes, whole blood, and intestinal intubation and suction is of great value in reducing mortality from perforation. Early ambulation apparently is an important factor in preventing pulmonary complications.

Antibiotics do not supplant good general care as the most important element in treatment of appendiceal perforation. Use of antibiotics in simple, uncomplicated acute appendicitis is of no value and should be condemned in view of the inherent complications of antibiotic therapy. However, the agents significantly reduce the incidence of postoperative abdominal and subphrenic abscesses and associated complications and should be vigorously employed when necessary.

The diminishing mortality from appendicitis, Ann. Surg. 141:749-758, 1955.

Therapy for Head and Neck Cancer

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Although both surgery and irradiation have been widely used to control primary cancer foci in the head and neck, successful ablation of lymph node metastases is largely accomplished by radical excision.*

Most cancers of the head and neck spread unilaterally through tumor emboli to the regional lymph nodes. Bilateral metastases may occur, however, if the primary lesion is near the midline. The deep cervical lymphatics are involved first by the tumor emboli, and the superficial group is usually infiltrated late in the disease process by retrograde metastases.

Radical neck dissection in discontinuity is that in which the primary lesion is excised and, after two or three weeks, neck dissection is performed. Theoretically, the delay permits cancer cells in the lymphatics to reach the nodes. This staged procedure may be done when regional metastases are demonstrable but operable, but prophylactic neck dissection in discontinuity should never be done.

In general, neck dissection should not be done if distant metastases, fixation of cervical lymph nodes to underlying structures, secondary lymphatic skin invasion, or physical intolerance to major operation exists. In most instances, neck dissection can be delayed without serious consequences until node metastases appear.

Bilateral neck dissection is done most frequently for cervical metastases from primary tumors of the thyroid, larynx, or tongue. Neck dissection is sometimes done prophylactically for cancers of the tongue and buccal cavity but seldom for cancers of the lip. With bilateral surgery, a radical neck dissection is done on the most involved side and a supraomohyoid dissection on the contralateral side.

The primary tumor and regional lymph nodes may be removed in continuity. A hemimandibulectomy when necessary and wide excision of the intraoral or lingual primary site can be done in continuity with a radical neck dissection, thereby excising all lymphatic channels between the lesion and satellite metastases. Tracheostomy must always be done when extensive surgery of intraoral structures is contemplated.

Supraomohyoid neck dissection has largely replaced suprahyoid and submaxillary dissections. The jugular vein is not sacrificed, and the procedure may be done either bilaterally or unilaterally. Complete radical neck dissection comprises

*An evaluation of neck dissection associated with other radical procedures for the treatment of cancer in the head and neck. Ann. Surg. 141:910-939, 1955.

excision of the sternomastoid muscle, the internal jugular vein, and the contents of all the triangles of the neck on the affected side. Structures preserved are the phrenic, vagus, and hypoglossal nerves and the carotid artery. Radical neck dis-

section effectively deals with all regional lymphatic depots.

Prognosis after neck dissection with positive nodes is more favorable with cancer of the lip than with other malignant tumors of the head and neck.

Cancer of Lower Esophagus and Cardia

JOHN M. CAREY, M.D., AND O. THERON CLAGETT, M.D., MAYO CLINIC AND FOUNDATION, ROCHESTER, MINN., report that transthoracic resection of a malignant tumor involving the lower portion of the esophagus and the cardia of the stomach is a feasible and valuable procedure. Although operation involves considerable risk, in general the results are comparable to those in other fields of surgery for cancer.

Surgical exploration of the neoplasm usually is performed through a primary left lower thoracotomy incision. Occasionally, tumors involving the stomach are explored through an abdominal incision to determine operability before proceeding with a separate thora-

cotomy incision or with a thoracoabdominal incision.

The technic is as follows: The lower portions of the esophagus and stomach are mobilized extensively, preserving as much of the right gastric and right gastroepiploic circulation to permit wide resection of the neoplasm. The resection is extended well down on the lesser curvature, and the greater curvature of the stomach is converted into a tube. End-to-end anastomosis of the esophagus and gastric tube is done by means of 2 rows of interrupted silk sutures. The anastomosed gastric tube is replaced in the mediastinum, and the mediastinal pleura is repaired. The diaphragm is closed snugly around the gastric tube. End-to-end anastomosis of the esophagus to the stomach is preferable to closure of the end of the stomach with implantation of the esophagus into the wall of the stomach.

Temporary closed drainage of the pleural space is employed. A catheter need not be inserted through the nose and esophagus into the stomach. Prophylactic antibiotic therapy is given after surgery. The greatest hazards of operation are anastomotic leakage and re-

lated complications.

Resection for adenocarcinoma of the cardia is performed approximately 3 times as often as resection for squamous-cell carcinoma of the lower portion of the esophagus.

Carcinoma of the lower portion of the esophagus and cardia of the stomach. Ann. Surg. 142:2-5, 1955.

Thymomas and Myasthenia Gravis

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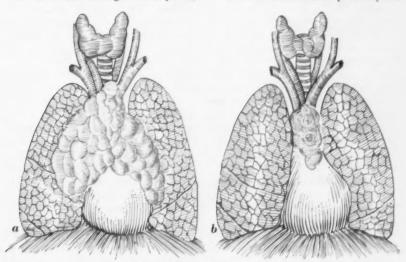
True thymomas, whether associated with myasthenia gravis or not, require surgical or radiation therapy as soon as the diagnosis is made.*

ABOUT 15% of patients with myasthenia gravis have thymic tumors. Although teratomas, epidermoids, Hodgkin's granulomas, sarcomas, or metastases may be found in the thymic area, the lesion associated with peripheral neuromuscular dysfunction is a true epithelioma arising from thymic elements. Thymomas are not truly benign and tend to break through the capsule.

to invade lung and pleura, and, occasionally, to recur with widespread local metastases after primary surgical removal.

The myasthenic patient with thymoma in the anterior mediastinum must be carefully studied since the tumor alters the prognosis and therapeutic regimen. Most often, the neuromuscular symptoms with thymoma are rapid in onset, relatively resistant to the usual medications, and of greater severity when the muscles of respiration are affected. Myasthenia may become irreversible when associated with thymoma.

The exact relationship of thymic



Thymus in infant [a] and thymic tumor in adult [b]

*Investigations into thymic disease and tumor formation. Brit. J. Surg. 62:449-462, 1955.

tumors to peripheral neuromuscular transmission is still not clear, but extracts from human thymomas reveal a definite ability to decrease contractions in a nerve-muscle preparation and may paralyze small animals. Hassall's corpuscles, ectodermal in origin, are not thought to be responsible for the changes in myasthenia gravis, since, in the usual myasthenic thymus, these elements are normal or reduced in number.

The increased number of endodermal reticulum cells that arise from the inner lining of the third brachial complex, on the other hand, may be the precursor of thymomas and responsible for the endocrine-like effect on neuromuscular transmission. The role of the mature thymocytes and the lymphocytes in the germinal centers is not clear.

Although the myasthenic patient may harbor a tumor, the lesion often escapes detection at first because of its small size, but the longer the duration of the myasthenia, the more likely that tumor will be found at surgery. Not all thymomas are associated with symptoms of myasthenia, but since any thymic tumor is capable of neoplastic alteration, all such growths should be treated by surgery or radiation.

Although females are most often affected, the proportion of males with myasthenia and thymomas is much greater than is found in myasthenia without tumors. While about one-half of patients with myasthenia alone are under 30 years of age at onset, most thymomas

occur in the decade between 30 and 40 years, indicating that when myasthenia appears in an older patient, thymic tumor should be suspected.

Diagnosis of a thymic tumor depends upon complete roentgenographic examination. The usual anteroposterior chest film is most often uninformative unless the mass is very large. In infants, the usual thymic shadow may appear as a large sail-like structure on the anteroposterior film, but final tumor diagnosis in adults always requires lateral films and tomograms. The tumor is usually located at the root of the aorta anteriorly and is therefore easily obscured by heart and vessel shadows.

The location of thymic tumors and the fact that severe muscle weakness may be associated render primary surgery difficult and hazardous. Removal of pleural implants may produce pneumothorax which is fatal in the myasthenic patient with involvement of the muscles of respiration. Involvement of the great vessels creates further risk.

Radiation therapy, however, is capable of shrinking the tumor greatly so that subsequent surgery can be done with far less risk. Since the tumor may require high doses of radiation, the beam must be carefully controlled to avoid damage to surrounding structures in the mediastinum.

An increase in the symptoms of myasthenia, which not infrequently occurs during treatment, requires suspension of radiation for variable periods.

Surgery for Funnel Chest

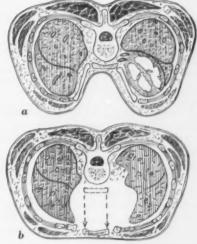
P. F. HAUSMANN, M.D.

Marquette University, Milwaukee

Corrective surgery for funnel chest should be performed during the second year of life unless earlier operation is needed to establish adequate respiratory exchange.*

THE surgical correction of pectus excavatum, or funnel chest, (Fig. a), is a well-established procedure which is universally performed with success and negligible mortality. Defects classified as moderate to large usually do not increase appreciably in size, and surgery can be safely delayed until the patient has reached the age of 12 months. Fixed sternal deformities do not occur before 2 years of age. Therefore, the ideal age for surgery is 12 to 24 months.

Although occasionally a substernal ligament-cutting operation without costal cartilage resection will suffice, the definitive procedure is an extensive subperichondrial resection of all deformed costal cartilages with elevation of the sternum (Fig. b). Stability of the chest wall usually returns within two weeks after operation. The defect is not due to pull on the sternum by the substernal ligament. Rather, the sternum is pushed toward the vertebral column by the cartilaginous overgrowth. A subperichondrial resection of the cartilages and ele-



Cross section of thorax, showing funnel chest [a] and surgical correction [b]

vation of the sternum permit regeneration of the cartilages in the proper anatomic plane.

Operations for infants with small defects and little or no paradoxic respiratory movement of the lower thorax should be deferred because, in over 50% of such cases, the deformity will spontaneously disappear. The amount of paradoxic motion determines whether or not a deformity will increase with the age of the patient.

Physiotherapy is important after surgery to correct the round-shouldered, pot-bellied habitus of the child.

^{*}The surgical management of funnel chest. J. Thoracic Surg. 29:636-648, 1955.

Strangulating External Hernia

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In every case of intestinal obstruction and in all elderly patients with vague abdominal complaints, strangulated external hernia should be considered.*

THE mortality rate from strangulating external hernia is distressingly high and can be lowered only by early diagnosis and prompt treatment.

Inspection and palpation of all the common hernial orifices with the patient erect, should be a part of the physical examination. Absence of a history of hernia is no guarantee that the lesion does not exist. Symptoms of intestinal obstruction in addition to local pain at the site of protrusion are usual, but femoral hernia does not cause local pain as often as inguinal hernia.

Strangulating external hernia is a major cause of small bowel obstruction. Obturator, femoral, and umbilical hernias become strangulated more frequently than inguinal and ventral hernias, but strangulation of inguinal hernia is most common because of the preponderance of inguinal hernias.

The strangulating inguinal hernia is usually indirect, and incarceration occurs at the external ring. Greatest incidence is among males. The incarceration rate in infantile inguinal hernias is relatively high but most do not progress to true strangulation. Umbilical hernia, a common lesion in infants, rarely becomes incarcerated or strangulated in young patients and often disappears without surgical treatment.

Every patient with strangulating external hernia should be operated upon before gangrene occurs.

Preoperatively, an infusion of dextrose and water is begun. When flow of urine is established, normal saline or saline in dextrose may be given. If hypokalemia exists, potassium is given intravenously as soon as urinary output is adequate.

The stomach should be emptied by a tube and kept empty with continuous suction during surgery and during part of the postoperative period. Occasionally, intestinal distention may be relieved by intubation.

Intramuscular penicillin and intravenous Aureomycin are administered as soon as diagnosis is made. Neomycin may be instilled into the lumen of the gastrointestinal tract through a small-bore needle during operation.

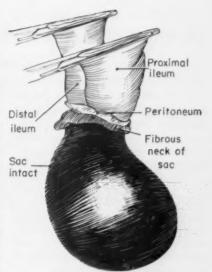
Discretion must be used in giving preoperative opiates to elderly persons. Local anesthesia with 0.5 to 1% procaine is best for most patients. Endotracheal intubation guards against aspiration of gastric

^{*}The management of strangulating external hernia. S. Clin. North America 35:429-439, 1955.

contents into the respiratory passages.

A transverse incision parallel to the skin creases, placed about half way between the internal ring and the pubic spine, is best for inguinal hernias. The incision for large ventral or umbilical hernia should not be directly over a strangulated loop. For femoral hernia a vertical incision over the sac is made first. If the strangulation is found, the incision is extended cephalad and joined as a T to an oblique incision several centimeters above and parallel to the inguinal ligament.

The contents of the strangulating hernial sac must be carefully explored before the neck of the hernia is divided and the viscera are dropped back into the peritoneal cavity. The best approach is block resection of the sac and contents, the loops of the intestine to and from the hernia, and also the intact fibrous ring (see illustration).



Specimen after removal

A closed, aseptic intestinal anastomosis is used for small bowel obstruction to circumvent spillage. A layer of interrupted Lembert sutures of 0000 silk is sufficient.

Management of Mastitis

ROBERT M. JANES, M.D., UNIVERSITY OF TORONTO, believes that the approach to mastitis should be extremely conservative, since the relationship of the condition to cancer of the breast is mainly diagnostic. However, every lump in the breast must be proved benign or malignant, and a breast lesion must be operated on if cancer cannot be defined by other methods.

Biopsy is not necessary in every instance of pain or discomfort in the breast or of a single cyst if the condition can be proved benign by simpler methods, such as examination or aspiration. If a cyst is suspected, aspiration with a small-bore needle during local anesthesia is done. If the cyst disappears completely and the aspirated fluid does not contain blood, the patient may be dismissed for six to eight weeks. If the cyst has not reappeared at that time, diagnosis is considered proved and the patient is completely discharged.

Management of mastitis. Postgrad. Med. 18:26-31, 1955.

Therapy of Acute Left Colon Obstruction

AUBRE DE L. MAYNARD, M.D., AND ROBERT TURELL, M.D. Harlem Hospital, New York City

Decompressive effectiveness and morbidity are similar after an exteriorizing type of cecostomy or a transverse colostomy for acutely obstructed left colon, but cecostomy is simpler to perform.

Acute colonic obstruction is usually the result of carcinoma. Symptoms may be slight because the obstruction is temporarily overcome by compensatory hypertrophy of the proximal bowel musculature. Sigmoidal volvulus usually starts abruptly with symptoms similar to those of a strangulated small intestinal obstruction.

Distention and vomiting do not always occur early. If the ileocecal valve is competent, a closed-loop type of obstruction is created, with late vomiting. An incompetent valve produces symptoms of small bowel obstruction. Biochemical alterations are much more pronounced if the valve is incompetent.

A plain film of the abdomen may be of assistance but is not always conclusive. A low-pressure barium enema will invariably localize and sometimes identify the obstructing lesion. Sigmoidoscopic examination aids in detecting low-lying lesions.

Mechanical large bowel block-

age, especially from carcinoma, constitutes a double problem. The proximal colon must be immediately decompressed and the obstruction removed as early as possible.

Decompressive efficiency and morbidity of a transverse rod colostomy and of an exteriorizing colostomy, done by an experienced surgeon, are about the same, but decompression of a tube cecostomy is average to poor. Over-all morbidity and mortality of an exteriorizing colostomy are only about half that of a transversostomy, but much depends on early diagnosis and therapy and surgical ability.

When the cecum is mobile, cecostomy is as easy or easier to perform than a right transverse colostomy. Furthermore, the transverse colon may be dangerous to handle when distended. The head of the most vulnerable part of the obstructed large bowel is also visible. A right transversostomy may make later resection of some left colon lesions more difficult.

Obstructing low-lying malignant lesions can sometimes be temporarily decompressed by endoscopy and insertion of a tube from below. Decompression from above by intestinal intubation is usually not satisfactory and may be dangerous.

If the bowel is obstructed by a

^{*}Acute left colon obstruction with special reference to cecostomy versus transversostomy. Surg., Gynec. & Obst. 100:667-674, 1955.

malignant lesion and contains mostly gas and liquid material, an exteriorizing eccostomy is done. A right transversostomy is performed if the contents are solid feces or residual barium, if the eccum lies high, or if local infection accompanies the neoplasm.

The abdomen is usually not explored, but limited exploration is permissible if preoperative symptoms are inconclusive, if free peritoneal gas is detected, if both small and large bowel distention are noted, or if sanguineous peritoneal

fluid is encountered.

To perform an exteriorizing cecostomy, the cecum is mobilized and 6 to 10 cm. is delivered through the wound. The procedure may then be handled in either of 2 ways.

1] The bowel may be surrounded with gauze and decompressed with a needle through a purse-string suture, after which a large Pezzer catheter is inserted and held with 2 purse-string sutures. The wound is then packed with gauze and suction is begun through the tube. The tube is taken out, and the opening is enlarged in a few days.

2] The fascia may be approximated loosely about the cecum and the subcutaneous tissue packed with gauze. After decompression, the packing is changed and the fascia is sutured to the cecal serosa.

For a colostomy, a loop of right transverse colon is freed of omentum and delivered up through a transverse incision lateral to the rectus. A glass rod is placed through the mesentery beneath the loop, and a loose layer closure is made about the bowel except for the skin. The subcutaneous tissue is packed loosely with petroleum jelly gauze. The bowel is opened either immediately or in about one day, with enlargement during the ensuing thirty-six to forty-eight hours.

After either cecostomy or transversostomy, the obstructing lesion is removed about two weeks later, and colonic continuity is restored.

Sigmoidal volvulus with obstruction but without vascular damage sometimes can be temporarily decompressed by sigmoidoscopy and tube insertion. About two weeks later, the redundant bowel segment is resected.

Acute obstruction from diverticulitis is usually treated with right transversostomy and complete gut transection, but exteriorizing cecostomy may be as efficient. Acute obstruction from venereal lymphogranuloma is treated with immediate right transverse colostomy.

¶ REGIONAL ENTERITIS may recur if aberrant Brunner-type glands are found in the resected ileum. C. A. Kawel, Jr., M.D., and Henry Tesluk, M.D., of Henry Ford Hospital, Detroit, observed that the disorder recurred in 8 of 16 patients with the abnormalities; no recurrences were noted in 18 subjects without the anomaly. The metaplastic structures resemble the glands of the pyloric region of the stomach and duodenum.

Gastroenterology 28:810-820, 1955.

Recognition of Meckel's Diverticulum

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Tulane University, Charity Hospital, and Touro Infirmary, New Orleans

When laparotomy is done, Meckel's diverticulum should be looked for and removed if the patient's condition permits.*

Hemorrhage, intestinal obstruction, diverticulitis, and abdominal pain are the usual complications of Meckel's diverticulum. An accurate diagnosis is rarely made preoperatively.



Bleeding may suggest the correct diagnosis. Gastric mucosa or pancreatic tissue in the diverticulum causes hemorrhage and may not be recognized unless serial sections are made. Maroon-colored blood is sometimes noted in the stools. When bleeding occurs, pain is often slight or absent.

With intussusception, in contrast, blood is bright red, and agonizing pain is of sudden onset.

Symptoms sometimes simulate atypical acute appendicitis, though pain is often more severe. Pain may be localized in the right lower quadrant but is sometimes in the midabdomen or left lower quadrant. At times, gangrene and perforation are noted to occur after suppuration.

A volvulus of the adjacent bowel as a result of fixation by a congenital peritoneal band may cause obstruction. Strangulation in an inguinal hernia may be observed on occasion.

Operation is generally done because of acute or chronic colicky pain. Intermittent obstruction probably causes the pain, though recurrent attacks of slight inflammation that regress spontaneously may be involved.

Barium examination rarely reveals the lesion.

Meckel's diverticulum should be removed to relieve pain or when found during surgery for another lesion if excision does not increase the risk of operation. A diverticulum should be resected even if the base is wide, since complications may occur.

The lesion may be overlooked

^{*}Meckel's diverticulum. Ann. Surg. 141:819-829, 1955.

even when a tentative diagnosis of Meckel's diverticulum is made before surgery if the entire midsection of the gut is not thoroughly explored. The pouch may be 3 ft. or more above the ileocecal valve. The bowel wall should be carefully palpated.

Of 100 instances of Meckel's diverticulum, laparotomy was done because of bleeding in 5 cases, obstruction in 10, diverticulitis in 10, acute pain in 31, and chronic pain in 15. The diverticulum was an incidental finding at operation in 29 instances.

Sex distribution was almost equal, and ages of the patients were from

6 weeks to 64 years. Hemorrhage is most common among children, whereas obstruction is most frequent in elderly people. The lesion was an incidental finding among patients as old as 64 years of age.

The anomaly was seen in 4 members of the same family, 2 sisters and the daughter and son of 1 woman. A giant diverticulum that measured 24 by 17 by 4 cm. and contained 1 liter of ileal contents was resected from a 19-year-old male. The lumen of the lesion was a direct extension of the adjacent ileal lumen; no common wall existed.

Thrombophlebitis of the Breast

JOSEPH H. FARROW, M.D., MEMORIAL CENTER, NEW YORK CITY, reports the occurrence of thrombophlebitis of the superficial veins of the breast and the anterior chest wall. Treatment is rarely required, since the condition subsides spontaneously and without recurrence, complications, or deformity.

Women with large pendulous breasts are especially prone to the disease. Symptoms, which may be absent, are sudden localized pain and tenderness usually accentuated by any maneuver that stretches the breast, such as raising the arm.

The characteristic finding is a fibrous, indurated, subcutaneous cord 3 to 5 mm. in diameter and ranging in length up to 26 cm. Elevation of the breast or stretching of the skin produces a shallow groove or a narrow ridge in the involved area which sometimes leads to the serious and erroneous diagnosis of lymphatic permeation from an occult breast cancer. Biopsy may be done when the diagnosis is in doubt, but usually the findings are sufficient for an accurate assessment.

In 43 patients, 1 male and 42 female, the exact cause of the thrombophlebitis was obscure. The condition appeared spontaneously in 24 and after minor local trauma, biopsy of breast nodules, or radical mastectomy in the remainder.

Thrombophlebitis of the superficial veins of the breast and anterior chest wall (Mondor's disease). Surg., Gynec. & Obst. 101:63-68, 1955.

Severe Gastrointestinal Hemorrhage

A REVIEW OF 2 ARTICLES

Diagnosis

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Esophagoscopic, gastroscopic, and radiologic examination should be performed immediately for patients with severe upper gastrointestinal bleeding.*

The source of upper gastrointestinal hemorrhage should be accurately localized before treatment is administered. Mortality is lower when therapy is specific than when diagnostic studies are delayed until bleeding ceases. A precise diagnosis is especially valuable when surgery is contemplated.

When a patient with bleeding is admitted to the hospital, blood is replaced immediately, and the usual history and physical examinations are performed. Diagnostic studies are done while transfusions are being given.

The stomach is lavaged with several quarts of ice water through a 30F Ewald tube. When the stomach is cleansed, esophagoscopic examination is made, usually without oral

anesthesia or sedation. The esophagoscope is passed under direct vision without the obturator in place so that the hypopharynx may be examined. If bleeding from esophageal varices or ulcer or esophagitis is detected, a Sengstaken tube should be inserted.

Occasionally, when cirrhosis is suspected, the Sengstaken tube may be inserted and the gastric balloon inflated before endoscopic study. If varices are found, a sclerosing solution is injected and the esophageal balloon is immediately inflated.

If the bleeding point is not in the esophagus, gastroscopic examination is done immediately. Bleeding gastric lesions are usually located easily. Lavage may be repeated if adequate examination is impaired by blood in the stomach. If blood is seen to flow into the stomach from the pylorus, the patient is presumed to have a bleeding duodenal ulcer.

Fluoroscopic study is performed even though the lesion is found by an endoscopic procedure. If a Sengstaken tube is in place, the opaque medium is instilled through the tube.

Skillful passage of tubes does not initiate or aggravate variceal bleeding. Also, the abdomen can be palpated during fluoroscopic study even though the wall may overlie a bleeding ulcer.

^{*}Severe upper gastrointestinal hemorrhage: early use of diagnostic technics. Connecticut M. J. 19:368-372, 1955.

The value of early diagnosis was determined by comparing 2 series of patients with severe gastrointestinal bleeding. Patients requiring at least 1,000 cc. of blood in the first six hours were included in the study. One group consisted of 212 patients who did not have diagnostic tests for seven days. Working diagnoses and therapy were based on clinical judgment. The other group included 163 persons who had early diagnostic tests. The results of the study are shown in the table.

DELAYED AND EARLY D	IAGNOSIS
Delayed diagnostic approach (per cent)	
Immediate diagnosis correct35	83
Emergency therapy proved optimum 55	86
Source of hemor- rhage not determined 15	11
Deaths from hemor- rhage 8	4
Emergency therapy had been directed	100
at correct diagnosis 56 Emergency surgery, 12	100
Preoperative diagnosis correct 28	100
Operative procedure proved to be optimum 56	100

The incidence of duodenal ulcers was overrated. When accurate localization of the bleeding site was delayed, the working diagnosis of duodenal ulcer was made in 134 instances but was proved correct by later studies in only 32 instances. Esophageal varices, gastritis, gastric ulcers, hiatus hernia, and esophagitis were underdiagnosed.

Surgical Treatment

CLAUDE E. WELCH, M.D., AND GORDON A. DONALDSON, M.D. Harvard University, Boston ARTHUR W. ALLEN, M.D. Massachusetts General Hospital, Boston

In order to lower mortality with massive gastrointestinal bleeding, surgery should be performed early for patients over 60 years of age.*

DUODENAL or gastric ulcer is the most frequent cause of severe bleeding from the upper gastrointestinal tract. Gastritis, esophageal ulcer or varices, hiatus hernia, and gastric tumor are other etiologic factors.

Hemorrhage is considered massive when hemoglobin falls to 7 gm. per 100 cc. or less or 5 or more transfusions are required, and moderately severe when the hemoglobin level is 7 to 10 gm. per 100 cc. and less than 5 transfusions are necessary.

Blood pressure is usually stabilized as soon as the patient is hospitalized. When active bleeding has stopped, roentgenographic examination is performed if the source of bleeding is not evident.

Emergency operation is recommended if rapid bleeding persists or hemorrhage recurs and ulcer or tumor is diagnosed or suspected. Every patient who has a single massive hemorrhage from an ulcer should eventually receive surgical therapy because recurrence is frequent.

*Surgical management of massive acute upper gastrointestinal hemorrhage. New England J. Med. 252:921-928, 1955.

Surgery can often be delayed if hernia is diagnosed and avoided if the patient has gastritis. Hemorrhage subsides spontaneously more frequently with these lesions than with ulcer.

Elderly patients should be operated on as soon as the diagnosis of massive hemorrhage from ulcer is made unless other conditions do not permit. Persons over 80 years old tolerate early surgery better than expectant management. Operation should not be delayed because of concomitant cardiac disease, cerebral arteriosclerosis, or renal disease; poor-risk patients do not tolerate bleeding well.

A distal partial gastrectomy, including 75% of the stomach, is usually performed. Resection of the ulcer is preferred. When the source of hemorrhage cannot be determined, a subtotal gastrectomy is done because bleeding in such cases is usually from gastritis. Double jejunostomy tubes are usually inserted.

Pulmonary complications are the most important cause of death. To prevent aspiration during surgery, a Levin tube is passed before operation, the larynx is cocainized, and a cuffed intratracheal tube is inserted. Aspiration may also cause death in the postoperative period if the stomach is not kept empty. Retrograde passage of a Levin tube through the jejunostomy into the gastric pouch provides satisfactory decompression postoperatively.

Elastic stockings, postoperative exercise of legs, early ambulation, and anticoagulants are prophylaxis against pulmonary emboli. Surgical interruption of the femoral veins is recommended for thrombophlebitis or pulmonary infarct.

Hemorrhage, another important cause of death, is more frequent when a duodenal ulcer is excluded rather than resected. When bleeding recurs after operation, the ulcer should be resected.

Replacement of potassium is essential to electrolyte balance.

Phantom Breast after Mastectomy

WILLIAM ACKERLY, M.D., WILLIAM LHAMON, M.D., AND WILLIAM T. FITTS, JR., M.D., UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, interviewed 50 women after radical mastectomy and found that 11 had symptoms referable to the amputated breast.

Symptoms began at intervals varying from the immediate postoperative period to two and one-half years after mastectomy but usually were first noted after the incision healed. Sensations included itching, tingling, heaviness, motion, and pain. None of the symptoms was severe enough to require treatment.

The phenomenon was unrelated to such factors as wearing of prostheses, number of pregnancies, or the patient's attitude toward functions of the breast from physical and psychic standpoints.

Phantom breast, J. Nerv. & Ment. Dis. 121:177-178, 1955.

Surgery for Malignant Melanoma

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Once diagnosis of malignant melanoma is confirmed, wide and deep excision of the primary lesion and removal of the regional lymph nodes offer the best chance for cure.*

PIGMENTED moles in prepubertal children are usually benign and rarely metastasize. However, such lesions in patients at or beyond puberty should always be suspected of being malignant.

Melanomas frequently arise from nevi of the junctional or compound type. Moles or nevi found in areas where melanomas are common, such as the external genitalia or soles of the feet, or where chronic irritation is likely should be excised as a prophylactic measure and studied microscopically. Even small, low-grade, superficial malignant disease may lead to widespread metastases.

Proper surgical treatment of malignant melanoma requires wide and deep local excision. Skin grafting is performed if primary closure of the wound is difficult. When the tumor is found near a lymph node group, as in the neck, axilla, or groin, en bloc dissection of the lesion and lymph nodes should be done. When continuous dissection is not possible, as with lesions on

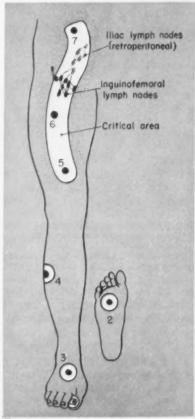


Fig. 1. Melanomas in the leg are treated by wide excision and secondary groin dissection at sites 1 through 4 and by continuous dissection with wide undermining of dotted area and resection of outlined ellipse of skin at sites 5 through 7.

^{*}The surgical treatment of melanoma. California Med. 82:444-446, 1955.

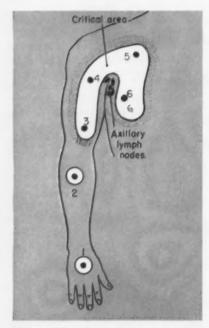


Fig. 2. Melanomas in the arm or upper anterior chest wall are treated by wide excision and secondary axillary dissection at sites 1 and 2 and by continuous dissection at sites 3 through 6.

the sole of the foot, lower arm, or back, wide local removal of the primary lesion and regional node dissection may be performed through separate incisions at the time of initial surgery. The proper management of melanomas of different regions of the body is shown in Figures 1 and 2.

Melanomas in the midline or in areas midway between the axilla and groin may involve 2 groups of lymph nodes. In such instances, dissection of both node groups at one time is not beneficial. These patients should be reexamined at regular intervals, and, if signs of node involvement are noted, the involved side should be excised. However, if metastases are bilateral at the time of primary surgery, bilateral node dissection in continuity is done.

Available information does not support the theory that major amputation of extremities for melanoma offers greater chances for cure than do wide excision and node dissection.

Of a large group of patients, the five-year survival rate was 14% when metastases were found at the time of surgery and 40% with no metastases. The over-all five-year survival rate was 21%.

¶ EARLY CANCER OF THE GALLBLADDER should be treated by cholecystectomy with total right hepatic lobectomy and nodal dissection. However, George T. Pack, M.D., Theodore R. Miller, M.D., and Richard D. Brasfield, M.D., of the Memorial Cancer Center, New York City, report that surgery should not be done if [1] progressive jaundice, dyspepsia, flatulence, vomiting, and constant pain occur after prolonged cholecystitis and cholelithiasis; [2] insidious asthenia and anorexia are associated with weight loss, vague abdominal discomfort, slight icterus, and an enlarged liver; or [3] painless, progressive jaundice is noted.

Ann. Surg. 142:6-16, 1955.

Etiology of Cerebral Palsy

NICHOLSON J. EASTMAN, M.D., AND MIGUEL DE LEON, M.D. Johns Hopkins University, Baltimore

Obstetric anomalies are the most frequent causes of cerebral palsy.*

Unfavorable environmental conditions between conception and birth are associated with about 60% of cerebral palsy cases. Less than 10% of persons with the disease are injured by a postnatal factor, and no specific etiology can be demonstrated in approximately 30% of instances.

In order to detect factors associated with cerebral palsy, 96 patients with the disorder and over 11,000 babies without the disease were compared.

In the first hour of life, 41% of babies who already or subsequently had cerebral palsy but only 2% of the control group were considered to be in poor condition. Most of these infants had respiratory disturbances, though flaccidity, cyanosis, and poor quality of the cry were occasional criteria.

Spontaneous breathing was delayed for six or more minutes among 13% of babies who did and 0.3% of children who did not have cerebral palsy.

Hospital stay of mature babies may be prolonged by respiratory dysfunction, repeated attacks of cyanosis, feeding difficulties, persistent unexplained fever, or failure to gain weight. The average hospital stay of each of the mature babies unaffected by cerebral palsy was about five days; the 62 mature babies with the disease were each hospitalized approximately fifteen days.

Premature birth is the etiologic factor most commonly associated with cerebral palsy. The incidence of early birth among the cerebral palsy patients was 35%, about 6 times the usual frequency. Complications that predispose to prematurity, especially abruptio placentae and placenta previa, may be the causative agents, rather than premature birth alone. However, no abnormal bleeding in the last half of gestation or in labor was associated with 23 of the 34 premature births of children with cerebral palsy.

About half of the cerebral palsied infants had sustained some mechanical, anoxic, or other injury before birth or during the delivery process.

Anoxia may be the most important factor causing cerebral palsy. Incidence of antepartum bleeding after the twentieth week of pregnancy is high among mothers of infants who have the disease, so placental separation with subsequent anoxia may be a frequent etiologic factor.

^{*}The etiology of cerebral palsy. Am. J. Obst. & Gynec. 69:950-961, 1955.

Prolonged neonatal fever was noted in 0.1% of the controls and in 30% of the children with cerebral palsy. Since neonatal fever occurs most frequently after prolonged, difficult labors, trauma may be the cause of cerebral palsy and of the fever. Temperature may be increased by injury to the hypothalamus.

Cerebral palsy can be caused directly by infectious diseases occurring in infancy; the younger the infant, the more serious the cerebral damage is likely to be. Infections contracted in utero may also be responsible. Intrapartum or neo-

natal fever should be combated with antibiotics.

Cerebral palsy is rarely caused by congenital malformations. Whether derangements are genetic or environmental is not known at the present time.

Erythroblastosis associated with kernicterus is a definite cause of cerebral palsy but is relatively uncommon.

Race, age, parity, syphilis, virus infection in the mother, type of pelvis, and duration of labor show no significant correlation with the subsequent development of the disease.

FERTILITY STUDIES should be made of a married couple if conception does not occur within a six-month period of exposure. M. James Whitelaw, M.D., of the University of California, San Francisco, reports that, of 250 white postpartum patients aged 20 to 34 years, pregnancy occurred in 50.8% within one month of exposure, in 69.6% within three months, and in 80% within six months. Fertility in the white female does not decrease until after the age of 29, but consistently irregular menses reduce the chance of conception. Overweight or previous use of contraceptives apparently does not affect fertility.

Fertil. & Steril. 6:103-111, 1955.

¶ PREGNANEDIOL EXCRETION apparently increases at a logarithmic rate between the twelfth and the thirty-second weeks of pregnancy when growth and function of the placenta are not disturbed. If a patient habitually aborts, urinary excretion of the sterol should be assayed at weekly intervals during the first trimester because dysfunction may be revealed by a decrease in elimination before symptoms occur. T. B. Robson, M.D., and A. G. Gornall, Ph.D., of the University of Toronto also find that pregnanediol determinations are useful when abortion threatens; prognosis is poor if excretion of the substance is reduced. Measurement of urinary pregnanediol is of little value as a pregnancy test unless elimination exceeds 10 mg. per day.

Canad. M.A.J. 72:830-834, 1955.

Treatment of Abruptio Placentae

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Prompt control of hemorrhage and relief of shock and renal arteriolar spasm are required when accidental hemorrhage occurs in late pregnancy.*

THE etiology of abruptio placentae is not entirely known. However, the following sequence may be presented concerning the mechanism producing the condition:

A uteroplacental vessel breaks down as a result of hypertension or a local degenerative vascular change or as an entirely accidental occurrence. Blood and clot collect behind the placenta and membranes (see illustration).

Shock occurs as a consequence of [1] distention of the sensitive uterus. [2] increased tension within the uterine cavity, and [3] tautness of the uterine walls upon the contents of the uterus. Shock is aggravated by anoxia from blood loss. With bleeding into the uterine muscle, myometrial tension is increased. The distention-tension phenomenon initiates and maintains through nervous pathways a harmful uterorenal reflex, resulting in active renal cortical arteriolar spasm, albuminuria, ischemia, oliguria, and, eventually, anuria. Renal vascular constriction is independent of changes in the systemic arterial blood pres-



Cross section of uterus in abruptio placenta

sure. The intralobular arterioles and the afferent arterioles to the nephrons are mainly affected, resulting in ischemia of the distal convoluted tubules and in reduction or cessation of glomerular filtration.

In addition to shock and anuria, serious clotting because of deficiency of fibrinogen may occur. The fundamental cause of the hypofibrinogenemia is uncertain. When blood fibrinogen level falls below 150 mg. per cent, hemorrhages are

*Accidental haemorrhage. Irish J. M. Sc. 353:195-214, 1955.

likely to occur. The uterus is tense and tender; bleeding occurs in the broad ligament and behind the pelvic and abdominal peritoneum: hemorrhages are noted on the surface of the levi and into the suprarenal glands; external antepartum bleeding arises from the placental site; and postpartum hemorrhage cannot be controlled by ergonovine, Pitocin, massage, packing, or ligation of internal iliac arteries.

Accidental hemorrhage produces a fetal mortality of approximately 50%. The maternal mortality is around 3%. About 60% of maternal deaths are caused by blood loss and about 25% by renal com-

plications.

Treatment must be prompt and comprises blood replacement, administration of oxygen, correction of the clotting defect, puncture of the membranes, splanchnic block for anuria, cesarean section in selected cases, and Bull's therapy, if required, during the puerperium.

• In the hospital, the patient is kept warm, and oxygen and sedatives

are given.

• The bladder is drained continuously with an accurate record of the volume of urine secreted.

· Blood fibrinogen determination is made, and a Lee-White coagulation

time done.

 Compatible blood is administered; 3 pt. is usually required. About 1 gm. of fibrinogen is yielded by 1 pt. of transfused blood, but when a rapid coagulation effect is essential, 4 to 6 gm. of pure human fibrinogen or 80 to 120 gm. of total plasma solids should be given intravenously.

• To reduce intraamniotic retroplacental tension, the membranes are ruptured and the amniotic fluid is drained off. This helps to lessen shock, break the harmful uterorenal reflex, reduce the escape of thromboplastin from the uterus, and stimulate labor.

• If little or no urine is secreted from the onset of acute illness, bilateral splanchnic block is done without delay in an attempt to re-

lax renal arteriolar spasm.

· Vaginal delivery is awaited if hemorrhage is controlled, the patient's general condition is satisfactory, urine output is more than 1 oz. per hour, and labor has commenced.

• The fetus and placenta probably should be removed by cesarean section if [1] external bleeding continues or begins again after temporary cessation; [2] internal hemorrhage, as evidenced by progressive uterine distention and tenderness, continues; [3] shock progresses; [4] the kidneys are not functioning; [5] the uterus is not contracting; and [6] the patient is still undelivered eight hours after the onset of the illness.

• Bull's treatment is employed for puerperal oliguria or anuria. This therapy consists of a balanced intake of fluid, protein-sparing glucose, and fat. The twenty-four-hour amounts are 400 gm. of glucose, 200 gm. of olive oil or peanut oil, brilliant green, and 600 cc. of water. Each hour, 25 cc. is administered through a small gastric tube left in the stomach. In order to avoid loss of valuable electrolytes, any vomitus is collected, strained, and returned through the tube.

Dührssen's Incisions for Prolonged Labor

FRANK E. RUBOVITS, M.D., AND NORMAN R. COOPERMAN, M.D. Chicago Maternity Center

If definite criteria are observed, Dührssen's incisions for prolonged labor do not increase fetal mortality or cause damage to the mother.*

DÜHRSSEN'S incisions are deep wounds made in the cervix uteri to facilitate delivery. Some factors predisposing to prolonged labor may require such incisions. Those most consistently involved are [1] premature rupture of the membranes, [2] onset of labor with an unengaged head in the primigravida, [3] the occipitoposterior or transverse position, [4] a desultory type of labor with inertia, and [5] a cephalopelvic ratio of 1:1 with positional dystocia.

The incisions may be safely utilized if the following criteria are present:

- No cephalopelvic disproportion
- Complete cervical effacement
- Fetal skull located 1 to 2 cm. below the spines
- Dilatation of 5 cm. or more
- Lack of progress with ruptured membranes for at least six to eight hours after adequate sedation and maintenance of fluid balance.

Generally, the cervix is cut with angled scissors at 2, 6, and 10 o'clock sites between 8-in. clamps or ring forceps under direct vision; the incisions are extended to the vaginal fornices. When possible, the 6 o'clock incision is performed initially.

After the 3 cuts are made, the diameter of the cervical ostium is equivalent to complete dilatation. When the cervix is not incised to the fornix or when fewer than 3 cuts are made, involuntary extension of the incision frequently occurs. Continuous catgut sutures are used for repair.

Bleeding is practically absent in the completely effaced cervix. Blood loss in the third stage of labor is increased, but such loss is ascribable to prolonged labor and uterine inertia rather than to the cervical incisions.

Saddle-block anesthesia is effective, safe, and adequate for the performance of the incisions and in addition allows delivery by forceps.

Cesarean section and intravenous Pituitrin should not compete with the use of Dührssen's operation in patients who are appropriately selected.

Cervical incisions should not be considered a procedure of desperation, and fetal embarrassment and maternal exhaustion are not prerequisites.

^{*}The role of Dührssen's incisions in prolonged labor. Am. J. Obst. & Gynec. 69:1183-1192, 1955.

Diagnosis of Orthopedic Lesions

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Aspiration biopsy is simple, safe, and accurate when used for diagnosis of orthopedic lesions, provided the correct technic is used and the material is examined by competent pathologists.*

Diagnosis of osteoarticular lesions is usually based on physical, roent-genographic, and laboratory examinations. When diagnosis is doubtful, the lesion must be examined directly. Aspiration is a simple procedure which does not require special training or, except for some regions such as the spine, compli-

cated equipment. The patient is not submitted to the risk induced by direct operation on a deep-lying lesion. On the other hand, the amount of aspirated material may be small, in which case the puncture must be repeated. Insufficient aspiration may be caused by a sclerotic lesion or use of a wrong technic.

Aspiration should be done before treatment is begun, particularly application of roentgen rays, since disruption of cytologic structure may make later diagnosis impossible.

Roentgenograms are used to lo-

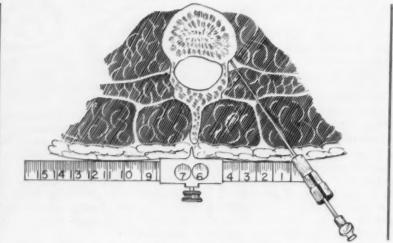


Fig. 1. Equipment for aspiration biopsy

*Diagnosis of orthopaedic lesions by aspiration biopsy. J. Bone & Joint Surg. 37-A:443-464, 1955.

cate the lesion, and, after the surgeon has made a number of punctures, a special tactile sense is acquired which indicates the location of the needle tip at all times.

Syringes with metal sleeves or at least metal tips are used. The needle should be 2 mm. in diameter and acutely beveled at the tip. The skin is punctured with a scalpel. When the site is reached, the needle should be pointed in several directions. Aspiration is made after a vacuum has been produced in the hermetically-sealed syringe by a 1-cm. withdrawal of the piston. With sclerotic lesions which offer strong resistance to the needle, perforation is made with a drill.

Aspiration biopsy of the spine requires a special technic utilizing a needle guide, 2 needles, and a lined metal plate. The correct position of the needle is at an angle of 35°, which corresponds to the direction of the guide (Fig. 1). Due to anatomic difficulties, aspiration biopsy between the first and tenth thoracic vertebrae cannot be done with this technic. The upper cervical vertebrae are punctured by the pharyngeal approach, the lower cervical vertebrae by the lateral approach, and the eleventh thoracic to the fifth lumbar vertebrae by the lateroposterior approach (Fig. 2).

When possible, a cytologic study is performed on a smear of the aspirated material, but the greater portion should be embedded in paraffin. A precise cytologic diagnosis is often difficult, since only the cells and not the structure are studied. The services of a competent anatomopathologist are required.

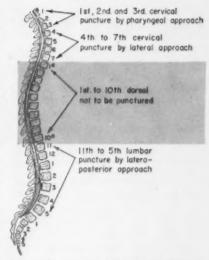


Fig. 2. Approaches for aspiration biopsy

Differentiation between primary and metastatic tumors is important, since subsequent therapy differs. Often, special stains of the material, such as silver impregnation for reticulum fibers or glycogen and alkaline phosphatase determinations, help to differentiate reticulum-cell sarcoma, Ewing's sarcoma, and Paget's disease.

Bacteriologic examination should be performed when inflammatory disease is suspected.

Results are uniformly good with a wide variety of conditions including osteogenic sarcoma, fibrosarcoma, Ewing's sarcoma, reticulum-cell sarcoma, myeloma, cysts, and inflammatory diseases. Although most metastatic carcinomas may be readily diagnosed by other means, in many instances the metastatic bone site is symptomatic before primary tumor is manifest.

Correction of Colles' Fracture

JOSEPH M. STRONG, M.D.

Elyria Memorial Hospital, Elyria, Ohio

The Watson-Jones method for treatment of Colles' fracture assures good functional and cosmetic results.*

ATRAUMATIC reduction of Colles' fracture and adequate fixation by means of a plaster splint are provided by the Watson-Jones technic. Swelling after reduction is slight, and circulation and function of the fingers and thumb are not restricted during immobilization of the wrist.

Widening of the distal fragments, as well as shortening and dorsal tilt of the radius, must be corrected when Colles' fracture is reduced. Narrowing the wrist prevents prominence of the ulnar styloid and provides good function, even if the dorsal tilt is not completely eliminated.

Intravenous Pentothal sodium, with or without curare, is recommended for anesthesia during reduction. If a local anesthetic is substituted, the drug should be injected into the fracture site ten minutes before manipulation.

If treatment is delayed for several days after injury and swelling occurs, hyaluronidase is infiltrated and the area is compressed with an elastic bandage for several hours before the fracture is reduced.

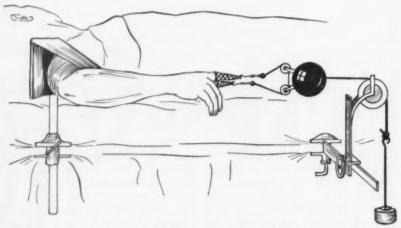


Fig. 1. Traction applied to index finger and thumb with wire finger traps *Treatment of Colles' fracture. Surg., Gynec. & Obst. 101:107-112, 1955.

The patient lies supine and the injured arm is extended horizontally on the same level. While an assistant maintains countertraction on the upper arm, the elbow is flexed at 90° and another assistant grasps the patient's thumb with one hand and the fingers with the other and pulls to disimpact the fragments. Wrapping the individual's thumb and fingers with adhesive tape assures a secure grasp.

Traction on the thumb restores the radial length. The operator corrects dorsal tilt of the radius by pushing the distal fragments volarward with the palm. The wrist is narrowed by compression of the radial styloid and ulnar styloid to-

ward each other.

During these manipulative procedures, traction and countertraction must be maintained. Need for assistants is eliminated when an apparatus consisting of a countertraction plate, an adjustable pulley and clamp, finger traps, and traction device with rope and weights is employed. The countertraction plate is attached to the table with a clamp and fastened to the arm with a bandage. For traction to the thumb and forefinger, 10- to 25-lb. weights are used (Fig. 1).

Immobilization is best accomplished by a well-moulded plaster splint. A splint consisting of 8 layers of 8-in.-wide plaster bandage is soaked in water, smoothed out, and, with 2 layers of 8-in. sheet wadding, placed over the dorsum of the forearm and wrist.

The splint should extend from the lateral epicondyle to the metacarpophalangeal joint. The splint partially encircles the forearm to include one-half of the radius and one-half of the ulna, permitting some expansion to accommodate for swelling. Full extension of the elbow is permitted (Fig. 2).

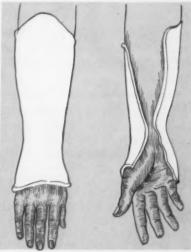


Fig. 2. Completed plaster splint

The soft plaster splint is held in place with a 2- or 3-in. gauze bandage and the plaster is molded while hardening takes place. The operator maintains reduction as the plaster sets by placing his thenar eminence over the dorsum of the radial fragment, one palm over the lateral aspect, and the other palm about 2 in. proximal to the ulnar styloid. The fragments are compressed between the two hands. After plaster hardens, the splint is wrapped with an elastic bandage.

Immediate motion of the fingers, elbow, and shoulders is recommended. Light work is resumed as soon as possible.

Dialysis in Uremic Children

F. M. MATEER, M.D., L. GREENMAN, M.D., AND T. S. DANOWSKI, M.D. University of Pittsburgh

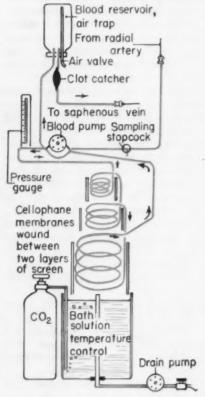
Fluid and electrolyte disturbances associated with uremia can be corrected by use of an artificial kidney.*

Patients with acute tubular necrosis, chronic renal failure with a potentially reversible phase, or terminal renal failure are suitable for dialysis with an artificial kidney. The procedure is not hazardous and is feasible for children.

The primary indication for dialysis is acute tubular necrosis with anuria. Tubular damage may be caused by ingestion of nephrotoxic substances, transfusion reactions, crush injuries, prolonged hypotension, or severe electrolyte depletion.

Dialysis should not be delayed until the patient is moribund, since death may occur despite restoration of the electrolyte pattern if treatment is begun too late, but should be started on the fifth or sixth day of anuria. Immediate dialysis is necessary for patients with potassium intoxication, convulsions, cardiac failure, pulmonary edema, extreme acidosis, or severe hyponatremia.

Acute exacerbations of chronic glomerulonephritis and pyelonephritis may cause progressive uremia even if urine output is maintained. Dialysis may arrest uremia long enough to control the acute process. Dialysis is also advisable if renal failure seems terminal, since the disease may be at least partially re-



Modified Alwall artificial kidney

*Hemodialysis of the uremic child. Am. J. Dis. Child. 89:645-655, 1955.

versible. Patients have survived for as long as seventeen months after treatment for failure diagnosed as terminal.

When dialysis is started, the patient receives 3 to 5 mg. of heparin per kilogram of body weight intravenously. Heparin is given in doses of 10 to 25 mg, every two to three hours during the procedure.

Blood is pumped from the radial artery to a roller pump, through a cellophane tubing which makes up the dialyzing membrane, back through the pump, and then to the saphenous vein by way of a bubble trap and clot catcher (see illustration).

The dialyzing bath is prepared by adding 120 gm. of sodium chloride, 60 gm. of sodium bicarbonate, and 50 gm. of glucose to 5 gal. of tap water. Carbon dioxide is bubbled through the solution for five minutes, and 4 gm. of calcium chloride in solution is added. Potassium is sometimes included, depending on blood levels. Every two hundred minutes, the bath is changed and 500 mg. of an antibiotic, generally oxytetracycline, is injected into the tubing.

Vital signs are recorded every five minutes at the beginning of dialysis and subsequently every fif-

teen minutes. At the time of each bath change, nonprotein nitrogen, sodium, potassium, calcium, phosphorus, and chloride levels in blood and bath are determined. In addition, blood is examined for glucose, bicarbonate, total proteins, albumin, and globulin.

Intravenous protamine sulfate is administered at the end of the pro-

cedure.

Shift of the fluid and electrolyte balance toward normal may be expected after treatment. Serum concentrations of sodium, chloride, calcium, and bicarbonate increase. Phosphorus decreases, as does potassium if the ion is not added to the bath.

Extracellular water is lost. Sodium is removed from the cells and the extracellular fluid, but concentration of the ion increases. The fall in nonprotein nitrogen is a good measurement of the effect of dialysis.

Bleeding is the only contraindication to use of the artificial kidney since heparinization is necessary. Caution should be exercised if a patient is receiving a digitalis preparation, since removal of potassium and addition of calcium may potentiate the effects of digitalization.

TONSILLECTOMY during childhood evidently does not reduce the incidence of common respiratory disease. Lois P. McCorkle, M.D., and associates of Western Reserve University, Cleveland, report that a four-year study of 230 children reveals that frequency, severity, and type of infections do not differ among patients who have and have not had the operation. A high incidence of respiratory disease among 26 subjects was not altered by tonsillectomy.

New England J. Med. 252:1066-1069, 1955.

Hypernatremia in Infants

LAURENCE FINBERG, M.D., AND HAROLD E. HARRISON, M.D. Johns Hopkins University, Baltimore

Diarrhea or infections which interfere with water intake in infants can result in hypernatremia and dehydration.*

Patients with hypernatremic dehydration, a condition of dehydration accompanied by serum sodium of 150 mEq. per liter, require special treatment. Recognition or suspicion of the condition from signs and symptoms and rapid confirmation by laboratory tests are essential for the best management.

Diarrhea, curtailment of water intake for twenty-four hours or more, excessive salt administration, infection with fever and hyperventilation, or symptoms or signs of nervous system injury, especially in a premature infant, should alert the physician to the possibility of hypernatremic dehydration. Almost half the infants do not appear significantly dehydrated even though subsequent weight curves reveal that body water was greatly reduced at the time of admission to the hospital.

Two-thirds of the infants with hypernatremia have manifestations suggesting a disturbance in the nervous system. The most common signs are alterations of consciousness varying from moderate lethargy to coma. Infants that can be aroused are often irritable and have high-pitched cries. Changes in muscle tone range from slight increase in tone with exaggerated deep tendon reflexes to rigidity, muscle twitchings, and frank convulsions. Neurologic manifestations are usually so pronounced that lumbar puncture may be considered for over half of the infants.

Patients that are apparently normal before hypernatremic dehydration may be left with severe permanent neurologic residua. Some infants show extensive subarachnoid hemorrhage at autopsy. Hypernatremia or the necessary concomitant, intracellular dehydration, probably is responsible for part of the nervous system damage.

For hypernatremic dehydration to occur, water loss from the extracellular fluid must be disproportionately high to sodium loss. With abrupt cessation of water intake, the water loss in diarrhea is proportionately greater than the electrolyte loss. High or protracted fever enhances water loss without electrolyte alteration.

The management of the disturbance in physiology of the hypernatremic dehydrated infant is especially difficult and cannot be accomplished with corrective solutions ordinarily effective in dehydrated infants. Because a large in-

^{*}Hypernatremia in infants. Pediatrics 16:1-14, 1955.

tracellular deficit exists, the repair solution should be relatively dilute with respect to sodium. The best results are obtained by administering fluids which, if combined, have a final sodium concentration of 15 to 40 mEq. per liter.

The correction of the hypernatremia using nonelectrolyte solutions should not be made too rapidly. Apparently, the rapid dilution of the extracellular fluid by intravenous administration of glucose in distilled water may precipitate convulsions even though the serum sodium is not reduced below normal.

Some patients have persistently low serum potassium levels after initial treatment. Oral or parenteral administration of potassium is essential to restoration of the electrolyte pattern. Hypocalcemia should be corrected by intravenous injection of calcium gluconate solutions.

Prognosis in Hypernephroma

MARION A. THROCKMORTON, HERTZLER CLINIC, HALSTEAD, KAN., reports that the prognosis in hypernephroma is unpredictable since patients with inoperable lesions have survived ten years while patients with apparently favorable outlooks after nephrectomy often live only a few months.

Micromorphology has been employed to facilitate prognosis, but cell types are not always a reliable basis. Large tumors have a poorer prognosis than small tumors because distant metastases are more likely. When a solitary metastasis is found, however, nephrectomy should be done if the metastasis can be removed.

When tumor thrombi are revealed in the renal veins (see illustration) or the vena cava, multiple metastases are probable and the prognosis is poor. However, patients with venous invasion have, on occasion, outlived patients with small tumors and no metastases. Perirenal tissue involvement usually



accompanies large tumors and connotes poor prognosis.

In 42 patients with hypernephroma who had nephrectomy, the five-year survival rate was 36.3% and the ten-year rate was 14.2%.

Prognosis in hypernephroma: review of the literature and report of 42 cases. J. Urol. 73:773-776, 1955.

Abdominal Aortography in Urology

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Although valuable in the recognition of medical and surgical lesions of the kidney, aortography, like urography, has definite weaknesses in differentiating renal cysts from neoplasms.*

A solitary, simple, serous renal cyst can usually be distinguished from a parenchymal neoplasm by history, physical examination, sedimentation rate, and urography. Most solitary cysts cause no symptoms; are rounded, tense smooth masses in the renal area; and are usually discovered by the patient or physician or during roentgenographic examination for some other purpose. Renal neoplasms are hard or irregular and often cause pain, hematuria, and an elevated sedimentation rate.

Urography helps to differentiate cysts from neoplasms. Cysts may, depending on location, distort the calyces and pelvis, but the margins of the collecting system are sharp and clear-cut if filling is complete. A renal neoplasm produces a more ragged or irregular deformity, with greater tendency to obliteration of calyces or pelvis. However, an encapsulated neoplasm may produce exactly the same deformity as a cyst of similar size.

Aspiration and injection of a contrast agent is the most reliable method for recognizing intracystic neoplasms. The tumor will appear as a filling defect in the otherwise round, sharply marginated shadow of uniform density usually cast by the contrast agent within the cyst. However, injection is safe only with palpable masses.

When the findings are inconclusive, abdominal aortography—renal angiography—may be valuable in establishing a diagnosis and deciding management of a lesion. Aortography may aid in [1] determining whether a kidney damaged by disease is worth saving; [2] demonstrating size, configuration, and vascularity of a kidney poorly outlined by other methods; and [3] showing congenital anomalies and fetal lobulation.

The striking differences in the vascular patterns differentiate renal cysts and neoplasms. Solid neoplasms, such as carcinoma, nephroma, and hypernephroma, have irregular collections of vascular sinuses of varying caliber. Solitary cysts appear as circular or oval defects in the renal circulation. A thin rim of vessels may be noted at the periphery of the cyst, but the individual vessel is normal in appearance. Epitheliomas of the renal

^{*}Differentiation of renal cysts from neoplasms by abdominal aortography: pitfalls. Radiology 64:831-839, 1955.

pelvis and the rare intracystic papillary cystadenocarcinoma are not sufficiently vascular to show as such

in angiograms.

Unfortunately, not all renal masses show the typical vascular abnormalities; a parenchymal neoplasm may resemble a cyst, and cysts may present atypical patterns. Large neoplasms compressing the renal artery may prevent delineation of

the blood supply of the kidney and the lesion. If only the arteries of the neoplasm are compressed, the contrast agent follows the path of least resistance, showing a deformity more like a cyst than neoplasm.

The conscientious urologist must still occasionally explore a kidney to avoid overlooking a neoplasm when a lesion produces atypical changes in the urogram and aortogram.

Radioactive Gold for Prostatic Cancer

H. DABNEY KERR, M.D., R. H. FLOCKS, M.D., H. B. ELKINS, M.D., DAVID CULP, M.D., AND T. C. EVANS, PH.D., STATE UNIVERSITY OF IOWA, IOWA CITY, treat carcinoma of the prostate by combining surgery and interstitial radiation. Radioactive gold, which has a large component of beta radiation and a relatively short half-life of less than three days, is employed rather than roentgen or gamma radiation to avoid, as much as possible, damage to surrounding tissues.

The method is reserved for lesions that cannot be completely removed and when distant metastases are not apparent. The lesion is exposed by a retropubic approach. The size of the gland is estimated and a search is made for metastatic nodes. When possible, grossly involved lymph nodes are removed rather than injected with radioactive material. As much of the carcinomatous tissue as possible is removed before injection in order to keep the total dosage small and to facilitate distribution of the isotope in the remaining neoplasm. Suspicious nodules palpated per rectum at subsequent examinations are injected perineally. As many as 4 or 5 additional injections may be required to eradicate all signs of persisting neoplasm.

When retropubic exploration is impossible because of the patient's physical status, the mass of the primary lesion is estimated and 2 mc. of radioactive gold is injected per gram of tissue. The maximum dose is 175 mc. and the millicurie-gram ratio is reduced

when very large tumors are treated.

Of 100 patients observed twenty-four to thirty-nine months, 46 are alive, 18 with and 28 without disease; 54 are dead. At least 13 died of causes other than carcinoma.

Follow-up study of one hundred cases of carcinoma of the prostate treated with radio-active gold. Radiology 64:637-641, 1955.

Benign Bladder Tumors in Children

EMIL J. GANEM, M.D., AND LEONARD B. AINSWORTH, M.D. Lawrence General Hospital, Lawrence, Mass.

Early detection of nonmalignant neoplasms of urinary bladders of children is essential to prevent permanent kidney damage, since interference with ureteral drainage and consequent uremia and renal infection are frequent.*

Hemangioma is the most common type of benign bladder tumor in children. Other forms are polyp, neurofibroma, fibroma, fibromyoma, fibromyxoma, fibropapilloma, myxoma, myoma, and dermoid cyst. Both benign and malignant tumors in children are usually mesothelial rather than epithelial in origin. Benign tumors apparently occur more frequently in males than in females.

Since the mortality rate is about 50% for benign and almost 100% for malignant growths, early detection is necessary.

Symptoms include persistent enuresis, dysuria, painful micturition, and suprapubic or perineal pain. Acute urinary retention may occur, and secondary urinary infection with severe burning, frequency, and systemic evidence of pyelonephritis is common.

Since the tumor usually involves the trigone and base of the bladder, renal insufficiency is noted early due to obstruction of the ureters (see illustration).

Ulceration of the mucosa or hemangioma may cause hematuria or gross hemorrhage with secondary anemia, but hematuria as a presenting symptom is not as likely as with adult bladder tumors. Rarely,



Tumor involving trigone and base of bladder, producing hydronephrotic kidney and ureter

*Benign neoplasms of the urinary bladder in children: review of the literature and report of a case. J. Urol. 73:1032-1038, 1955.

the neoplasm protrudes through the urethral meatus. Anorexia and disturbed nutritional state are observed. Angiomas on the skin suggest bladder hemangioma.

A complete urologic study should be done when a child has persistent enuresis with a suprapubic mass, disturbed bladder habit, or painless hematuria. If excretory urograms show no abnormality, cystoscopic examination should be done; a negative cystogram shadow observed during excretory urographic study does not exclude the possibility of bladder disease.

Inspection of the growth is not

reliable for excluding malignant disease. Transurethral or suprapubic biopsy is necessary for identification. Suction aspiration may yield sufficient tissue for microscopic diagnosis.

Unless the lesion has grown too large, suprapubic excision or segmental bladder resection is curative. Excision may be supplemented with fulguration of the bladder base and implantation of radon seed.

Superimposed renal infection may be controlled by chemotherapy and antibiotics after the obstruction has been removed.

Urinary Calculi Due to Leukemia Therapy

LOWRAIN E. MCCREA, M.D., PHILADELPHIA, reports that administration of compounds similar to nitrogen mustard for treatment of leukemia may result in formation of uric acid calculi in the urinary tract.

In leukemia, even without chemotherapy, uric acid may be elevated in the blood and urine. The compounds, such as triethylene melamine (TEM), triethylene phosphoramide (TEPA), and triethylene thiophosphoramide (Thio-TEPA), may produce excessive breakdown of nucleoproteins which, when excreted in the urine, result in precipitation of urates and uric acid. Uric acid crystals are usually deposited within the kidneys and ureters when the urine volume is inadequate or the urine is not alkaline. Calculus formation may be so extreme that complete obstructive uropathy, uremia, and death result.

Before administration of the compounds, an excretory urogram should be made, alkalization of urine and urinary intake and output are determined, and serum uric acid and blood urea nitrogen levels should be recorded daily. If these tests are significantly altered, ureteral catheterization and irrigation of the pelvis with an alkaline solution are performed. Adequate intake and output of fluid must be continued throughout therapy in order to maintain solubility of urine.

Formation of uric acid calculi during chemotherapy for leukemia, J. Urol. 73:29-34, 1955.

Diagnosis of Adrenal Disease

E. F. POUTASSE, M.D. Cleveland Clinic, Cleveland

Intravenous urography, presacral oxygen insufflation, and laminagrams may be helpful in the diagnosis of adrenal tumors.*

Demonstration of the adrenal gland by roentgenogram is difficult. Small size and relation to the upper pole of the kidney impair visualization. Because the gland is of approximately the same density as the retroperitoneal fat, contrast is poor. Plain films of the abdomen and excretory urograms may show soft tissue masses or displacement of the kidneys but are inadequate for outlining the adrenals.

When plain films and urograms are normal, special procedures may be necessary. Oxygen insufflated in the presacral region passes upward into the retroperitoneal space and outlines the organs. The procedure is uncomfortable for the patient, and gas embolism is a risk. Translumbar aortograms may occasionally be used to outline the blood supply of a large tumor but are of little value in the diagnosis of small tumors or hyperplasia. Laminagrams may demonstrate the adrenal glands effectively and involve neither instrumentation nor trauma.

Large, nonhormonal adrenal tu-

mors in children are readily demonstrated by urograms. The kidneys are displaced, but function is normal. Stippled calcification may be observed in the tumor mass. The differential diagnosis includes Wilms's tumor, renal cell carcinoma, and primary retroperitoneal tumor or cyst.

With a pheochromocytoma, the urogram is usually normal, but adrenolytic and provocative tests usually will establish the diagnosis. When the chemical tests are equivocal, demonstration of a tumor by presacral oxygen or laminagrams may be valuable.

The adrenogenital syndrome is due to overproduction of androgenic hormones. Tumor or hyperplasia may be responsible. Congenital hyperplasia produces pseudohermaphroditism with virilization and clitoral hypertrophy in girls. Sexual and somatic overdevelopment-macrogenitosomia praecox-occurs boys. A salt-losing syndrome caused by deficiency of normal adrenal steroids may occur shortly after birth, and 17-ketosteroid excretion is high. Roentgenographic studies are usually not required.

Virilization in females late in childhood or in adult life may be due to adrenal tumor or hyperplasia or to ovarian disease. Pre-

Value and limitation of roentgenographic diagnosis of adrenal disease. J. Urol. 73:891-900, 1955.

cocious puberty in males may be a result of adrenal disease but is most commonly due to an overactive pituitary gland. The response to cortisone may be of value in distinguishing tumor from hyperplasia. With hyperplasia, the elevated 17-ketosteroid excretion falls after administration of cortisone. No change takes place with tumor. Presacral oxygen or laminagraphy may be used to demonstrate the tumor.

Cushing's syndrome is caused by an overproduction of the carbohydrate-regulating adrenal steroids. Tumor, hyperplasia, or a basophilic adenoma of the pituitary may be responsible. Roentgen studies should include a lateral view of the skull for enlargement of the sella turcica and urograms to detect renal displacement and soft tissue masses. Urograms are normal with hyperplasia. Laminagrams may demonstrate a tumor mass. Presacral oxygen is frequently unsatisfactory in

patients with Cushing's syndrome because the abundant retroperitoneal fat interferes with distribution of the gas.

Surgical approaches may be planned more accurately if a suspected tumor is visualized by roentgenogram. If normal or bilaterally enlarged glands are demonstrated, exploration may not be necessary for resolution of growth and virilization problems. Roentgenographic diagnosis is more accurate on the right side than on the left. Displacement of the kidney by a tumor is more frequent on the right, and the liver provides good contrast for oxygen and laminagraphic studies.

While positive roentgenographic data are extremely valuable, negative roentgen studies do not exclude the diagnosis of tumor. Chemical methods of diagnosis are quite accurate, and if the endocrinologic studies suggest a tumor, exploration should be done.

Cancer and Concomitant Neuropathy

P. L. DE V. HART, M.D., ROYAL CANCER HOSPITAL, LONDON, observes two distinct types of nervous disease associated with cancer, especially carcinoma of the bronchus. Proximal motor weakness and brain stem signs but no sensory or spinal fluid changes are noted with one syndrome; the other includes peripheral mixed motor and sensory disorders and alterations of the spinal fluid.

Proximal disorders are attributed mainly to pyridoxine deficiency, while peripheral disease may result from a lack of pantothenic acid or riboflavin. Daily administration of thiamine and other B vitamins in large doses is recommended. Improvement occurs only after several weeks of treatment.

Carcinoma complicated by proximal motor neuropathy due to vitamin-B deficiency, Brit. M. J. 4862:606-609, 1954.

The Patient on the Verge of Violence

GEORGE N. THOMPSON, M.D.

University of Southern California, Los Angeles

The general practitioner should be prepared to recognize and manage potentially dangerous patients.*

PSYCHIATRIC emergencies are no more difficult to manage than are medical or surgical crises. However, training in psychologic medicine and knowledge of the anatomy and disorders of the nervous system are required.

Suicide—Every threat of suicide should be taken seriously. Turning on gas or taking sleeping pills intended as a threat may result in death.

About 50% of patients with involutional melancholia attempt suicide, and about 25% of attempts are successful. Patients with manic-depressive psychosis, depressed type, succeed less often because psychomotor activity is retarded.

When arteriosclerosis has destroyed part of the brain, the patient believes that deterioration will be progressive, and suicide appears to be a rational recourse.

Schizophrenic patients may be prompted to suicide by hallucinations. The matter-of-fact tone of such patients should engender caution, not relaxation. Patients with schizoaffective psychoses are particularly prone to suicide, as are persons with syphilitic meningoen-

cephalitis of the depressive variety.

Acute alcoholic depression during a drinking bout may result in suicide. Suicide is rare with psychoneurosis but may be attempted when psychoneurotic depression is superimposed.

Patients who attempt suicide should be admitted immediately to a hospital, preferably to the psychiatric service. The suicide impulse can often be stopped by a short course of electroshock therapy. Until then, constant surveillance is necessary or the patient may complete the suicide attempt by, for example, slashing his throat with a glass drinking tube, hanging on the curtain wires between the beds, or jumping down a stair well.

Homicide-Patients with schizophrenia of the paranoid type or epileptic furor are especially homicidal. Acute homosexual panic, a subvariety of paranoia, is probably the most dangerous condition. Psychopathic personality of pathologic emotionality type, acute mania, acute alcoholic psychosis with pathologic intoxication, senile psychosis of simple type, and psychosis with cerebral arteriosclerosis may also prompt murder. Parole should be sanctioned only with extreme caution, particularly for patients with true paranoia.

Alcoholism-A patient with

^{*}The general practitioner and the dangerous patient. GP Vol. 11, No. 6, pp. 58-66, 1955.

acute alcoholic psychosis may commit an act of violence after one or two drinks and have complete amnesia for the episode. Hallucinations may prompt violence even after withdrawal of alcohol.

Psychopathic personality—Such patients are apt to commit acts disturbing to society. Alcohol, by loosing the last vestiges of intellectual control, increases the danger of violence and is used compulsively by some psychopathic persons as a means of explosive release for pent-up emotional energies. In rare instances of pathologic criminality, the physician may be called on for a diagnosis simply because the offense is so horrible as to lead to the belief that the person must be insane.

Epilepsy—Individuals with epileptic furor may plan and carry out crimes while in an amnesic state. Psychomotor epilepsy, now easily diagnosed by electroencephalographic studies, is more common than ordinarily suspected. Assaultive behavior followed by partial amnesia may occur after only minor stimuli or none at all. Children with the disorder are usually considered behavior problems, and adults may be regarded as criminals.

Acute alcoholic psychosis of the pathologic intoxication type, psychopathic personality with pathologic emotionality of the aggressive type, and psychomotor epilepsy are basically identical syndromes. Factors common to the disorders are aggressive behavior, brain injury, and abnormal cerebral cortex discharges that are out of the individual's control.

Drug addiction—Underlying psychosis or neurosis may be revealed when a drug is withdrawn. Intensive psychotherapy is necessary.

Sudden Death from Asthma

DENIS LEIGH, M.D., MAUDSLEY HOSPITAL, LONDON, suggests that sudden death of an asthmatic patient may be explained by excessive vagal discharge, a reflex to peripheral afferent stimulation of parasympathetic pathways. The emotional release may produce a flow of intrabronchial mucus which results in asphyxiation.

A 40-year-old woman who had had asthma since the age of 10 was given psychiatric treatment. After 4 interviews, during which the patient had been extremely disturbed emotionally, the asthmatic attack subsided. The patient slept for the first time in many nights but awoke suddenly in an attack and was dead within five minutes.

Postmortem examination revealed widespread mucous plugging of bronchi, thickening and hyalinization of the basement membrane of the bronchial mucosa, eosinophilic infiltration of the bronchial wall and of the intrabronchial mucous plugs, and hyperplasia and mucinous degeneration of the mucous glands.

Sudden deaths from asthma. Psychosom. Med. 17:232-239, 1955.

Evaluation of Suicidal Risk

LUDWIG M. FRANK, M.D., AND THOMAS J. HURLEY, M.D. Institute of Living, Hartford, Conn.

Most attempts at suicide can be anticipated by evaluation of the patient's past, mental status, and physical condition.*

In evaluation of suicidal risk, a previous attempt at self-destruction must be viewed seriously, since depressed patients frequently try again. Factors involved in a suicide attempt may be of prognostic importance in differentiating the hysterical type of gesture from the serious one that failed. Also, the means employed in the attempt may attest to the seriousness.

A patient's expression of suicidal intent should never be dismissed as simply an attention-getting device. As many as 40% of suicides announce the intention. If the attempt fails, the patient may try to allay concern and thus prevent interference of the second try.

A patient with recent depression should be observed with particular caution. Groundless depressions were formerly thought to be the main causes of suicide, but loss of employment, financial reverses, disappointment in love, grief over an ailing child, or threatened exposure of a misdeed are now generally recognized as factors.

Recent heavy or unusual drinking should alert the physician, since deeply depressed patients sometimes drink to relieve the discomfort associated with an unrecognized depression. The symptoms of such a depression may include unaccustomed difficulties in talking with people, fatigue, restlessness, and apprehension.

The patient's mental status provides clues regarding an existing tendency to suicide. All agitated depressions point to potential suicide risks. Depressive stupors signify less immediate danger. States of acute panic may lead to serious attempts at self-destruction. Morbid thoughts centering around baseless self-accusation may suggest suicidal intention.

Physical examination may provide further clues. Transverse scars on the flexor surface of the wrist or linear scars about the neck are usually evidence of a previous suicidal attempt.

Direct questioning of the patient suspected of suicidal intentions is essential, and deferment for fear of giving the patient the idea is risky. The most reassuring reply is a qualified denial. A plain negative reply in an obviously depressed patient is of little value. A flood of self-accusations or expressions of hopelessness released by direct questioning should be viewed as a veiled admission of intent.

^{*}Evaluation of the suicidal risk. Connecticut M. J. 19:305-308, 1955.

Complications of Spinal Anesthesia

HALL G. HOLDER, M.D., AND CLIFFORD L. GRAVES, M.D. Scripps Memorial Hospital, La Jolla, Calif.

Errors in technic of administration and undiagnosed preexisting diseases of the spinal cord are responsible for many of the complications of spinal anesthesia.*

Proponents of spinal anesthesia believe that shock, capillary bleeding, depression, dehydration, postoperative nausea and vomiting, ileus, and physiologic imbalance are less than with general anesthesia. The relaxed field allows more accurate operations and less forceful retraction, packing of viscera, and diaphragmatic compression. In obstetrics, the 1-dose method by an experienced anesthesiologist lowers morbidity and mortality for both mother and child.

However, all anesthesias entail some risk. Neurologic complications of spinal anesthesia may result from various factors. Inaccurate or traumatic introduction of the needle into the subarachnoid space may injure the periosteum, pierce the annulus fibrosis or intervertebral disk, rupture the paravertebral plexus of veins, or damage nerve tissue. Many backaches that occur after spinal anesthesia may be due to such injuries.

Formation of an epidural hematoma, especially if blood enters the subarachnoid space, produces meningeal irritation. Damage to vessels and/or nerve roots may result in ischemic symptoms of the cord or nerve roots. Alteration of spinal fluid pressure due to the puncture may cause many of the complications attributed to the anesthetic agent.

The resistance of the subarachnoid space to contaminants and irritants is many times lower than that of the peritoneal cavity. Cursory skin preparation, multiple traumatic punctures, or lack of gauze protection of the gloved finger during palpation may allow introduction of contaminating or irritating substances.

Needles and syringes should be thoroughly cleansed and rinsed free of detergent solutions such as Detergex, which deposits a white precipitate in anesthetic solution. Ampules occasionally have microscopic defects permeable to sterilizing solutions. Dry sterilization or the use of colored sterilizing solutions helps avoid introduction of neurotoxic material into the subarachnoid space.

Continuous administration of spinal anesthesia is no longer considered necessary. When continuous technic is employed, pooling of drugs in the dorsal curve may result in temporary overconcentration and nerve damage. Total dosage is

^{*}Spinal anesthesia: a survey of neurologic complications. California Med. 82:426-429, 1955.

usually higher than with the 1-dose method, and the introduction of the needle or catheter adds to the potentiality of trauma or contamination. Animal experimentation indicates that permanent neurologic changes do not develop from a single dose administered into a normal spinal canal.

Undiagnosed preexisting disease of the spinal cord may be responsible for some lesions believed to be complications of anesthesia. Laymen often attribute unrelated neurogenic symptoms to spinal anesthesia.

Of 16 patients with neurologic complications after spinal anesthesia, 4 had severe or persistent symptoms, including fatal progressive adhesive arachnoiditis and motor and sensory disturbances lasting six months to five years. Transient sensory or motor symptoms persisted less than six months in 11 persons, and I subject had abducens paralysis which disappeared within six months. In 4 of the patients, neurologic symptoms may have been related to operative or positioning factors rather than to anesthesia.

TREATMENT OF PLANTAR WARTS with a 30% solution of euphorbium resin in alcohol is inexpensive and is as efficacious as other modalities. Wayne Wright, M.D., of Oakland, Calif., pares the wart, applies the medicament, and covers the area with adhesive tape for forty-eight hours. The procedure is repeated, if necessary, until the verruca can be shelled out. Liquid nitrogen is the most effective substance but is often unavailable. Carbon dioxide snow is satisfactory if sufficient pressure is applied for two minutes. Roentgen therapy is very successful but should be used only when other measures fail.

California Med. 82:450-453, 1955.

¶ CURETTAGE OF PLANTAR WARTS is a simple, relatively painless, and effective procedure which can be done in the office, report Everett R. Seale, M.D., and J. B. Richardson, M.D., of Houston. The area is cleansed with 70% alcohol and sprayed with ethyl chloride. Then, 2 cc. of a 1% solution of procaine without epinephrine is slowly injected under the lesion through a ½-in., 26-gauge needle. The keratinized surface is removed, and the verrucous tissue is shelled out with a small curet. Overhanging edges are trimmed with a curved scissors, the wound is filled with 5% Mercurochrome, and a pressure dressing is secured by adhesive tape which completely encircles the foot. An antibiotic ointment and a simple dressing are applied twice daily until healing of the site is complete.

South. M. J. 48:575-577, 1955.

Prescription for a Long Leg Brace

DUANE A. SCHRAM, M.D.

Veterans Administration Hospital, Seattle

Specific instructions should be given for construction of a long leg brace so that basic requirements are fulfilled.*

PROTECTION or mobilization or both, as well as support, should be provided by a long leg brace.

Ordinarily, the weight of the trunk should be carried on the leg, and the brace should support the leg. A brace should be designed for body support only if the patient has bone disease, fracture, or some other specific requirement for a weightbearing prop.

The brace should be fitted accurately, using the conventional three-point pressure method. The upper thigh band and the shoe are the distal fixed ends of two lever arms; the fulcrum of the system is the region of the knee in which the least pressure is necessary to extend the joint.

A long leg brace splints the lower extremity and consequently always provides some protection. In some instances, the brace must be designed to provide specific protection.

When back-knee is slight, hyperextension is prevented by the midthigh band; when recurvatum is severe, additional pressure should be exerted below the knee by the calf band or by a leather downward extension added to the midthigh band.

An anterior, posterior, or double stop at the ankle can be prescribed to prevent excessive stretching of the anterior or posterior neuromuscular units of the lower leg.

Braces can be used for positioning. The extremities can be rendered immobile in a neutral position by splinting one brace to the other with a crossbar between the inner uprights.

Frequently, mobilization procedures using a long leg brace can supplement manual stretching or may be used after surgical release of resistant contractures. A brace alone may be sufficient to alleviate moderate contractures. The degree and resistivity of the deformity must be carefully determined. Traction should be gradually increased. The tolerance of the patient is the best guide to the amount of tension and the length of time the traction should be applied.

After the requisites of the patient are assessed, details of construction can be prescribed. The basic units of the long leg brace are frame, knee joint, and ankle joint.

A frame of heavy gauge material is required for children, persons who do hard work, and patients with severe spastic residue. If the

Prescription for the long leg brace. Arch. Phys. Med. 36:330-334, 1955.

patient does light work or has flaccid neuromuscular residue, less emphasis may be put on rigidity, and utility and appearance are considered.

Pelvic bands should be prescribed when spasm is severe or hips are hypermobile. When external rotators are moderately to severely contracted, a pelvic band may be used to align the legs, but a strong twisting force on the leg may cause varus deformity.

For the knee joint, a ring lock with a simple spring extension providing an automatic drop lock is probably the most adaptable and efficient device.

If a patient has prominent inner condyles, a relatively large hinge such as the box or mill type is too bulky and causes the patient to walk with abduction. Instead, the inner uprights should be joined by a single lap joint.

A well-fitting shoe with a firm shank is the foundation of a long leg brace. Stirrup hinges or a caliper attachment may be prescribed.

The stirrup hinge is sturdiest, but the caliper hinge is more useful and has a better appearance. The stirrup hinge is preferred for children since rough use is anticipated and only one pair of shoes is worn. The caliper hinge is best for women.

The placement of the shoe attachment should be determined by the degree of toe-out.

Accurate fitting and frequent reevaluation for repairs and adjustments are necessary for adequate bracing.

Rapid Preparation for Sigmoidoscopic Study

JOSEPH M. GROSS, M.D., BETH EL HOSPITAL, BROOKLYN, reports that patients can be rapidly prepared for sigmoidoscopic examination by use of Fleet Enema Units, a plastic disposable squeeze bottle. Satisfactory evacuation is immediate and, generally, without discomfort when the contents of a disposable bottle, 21.6 gm. of sodium biphosphate and 8.1 gm. of sodium phosphate in 4.5 oz. of water, are squeezed into the rectum. The foolproof tip permits the enema to be administered by the patient. Sigmoidoscopic examination is easily accomplished thirty minutes later.

The squeeze bottle enema is useful at cancer detection centers and for office patients when rectal examination before washing is desirable, as for persons with rectal bleeding.

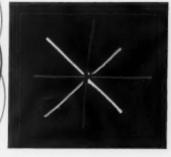
The sigmoidoscope could be passed to 8 in. or more in 80% and to 6 to 7 in. in 17% of 66 patients after squeeze bottle enema. Only 2 patients had cramps and 3 had a burning sensation for a few seconds after the enema was administered. Comparable values for a group of 175 persons who took 2 enemas at home were 35 and 30%.

Preparation for sigmoidoscopy in a cancer detection center. J. Internat. Coll. Surg. 23:34-37, 1955.

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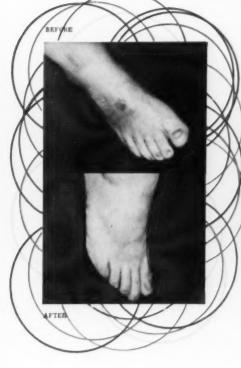
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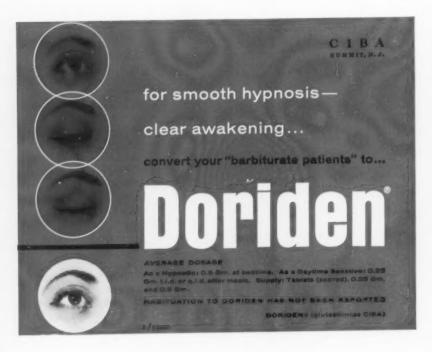
Tablets, 25 mg. (scored) Elixir, 25 mg. per 4 ml. Multiple-dose Vials, 10 ml., 25 mg. per ml.

 Photographs and clinical data by courtesy of R. I. Lowenberg, M. D., Consultant in Vascular Surgery, Connecticut State Hospital, Middletown, Connecticut.



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Late Effects of Radium Salts

W. B. LOONEY, M.D., R. J. HASTERLIK, M.D., A. M. BRUES, M.D., AND E. SKIRMONT University of Chicago

Patients who receive radium may have asymptomatic bone lesions many years after treatment.*

Hundred, perhaps a thousand, individuals in the United States who received radium orally or parenterally twenty or more years ago carry deposits of the element. The patients are generally unaware of the circumstance until delayed toxic effects obviously attributable to radium become apparent. The skeleton is commonly affected.

Roentgenographic changes associated with radium in the bones are classified into 3 groups.

Group 1. When the body burden of radium is small, roentgenographic lesions are multiple 1 to 2 mm. by 5 to 20 mm. areas of decreased density in the fibula, tibia, radius, ulna, humerus, and femur. The bone has a streaked appearance. Punched out areas in the skull, 2 to 10 mm. in diameter, are related lesions, but must be differentiated from multiple myeloma.

Such appearance does not prove but suggests that significant quantities of radium are in the skeleton, especially when the site is the cortex of the extremities of long bones; this stage represents the least possible damage that can be recognized roentgenographically. The patients are asymptomatic.

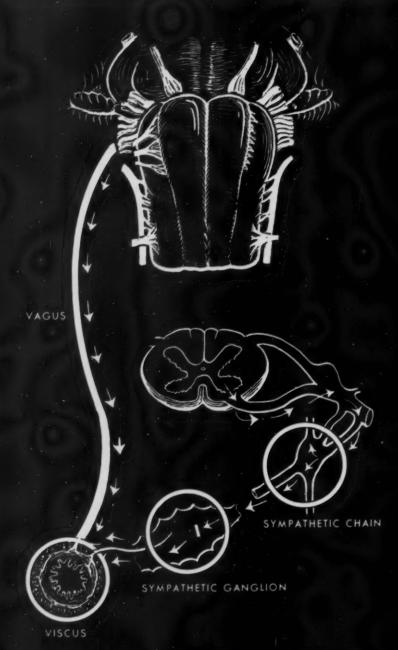
Group 2. Associated areas of increased and decreased density and variable alteration of trabecular pattern occur among patients retaining large burdens of radium. The alae of the ileum and the heads of the femur and humerus are most frequently involved.

Group 3. Repeated mechanical insult may produce areas of aseptic necrosis, often with sequestration at sites of radium deposits in bones. The lesions are observed in the mandible, tarsal scaphoid, vertebral bodies, the head of the femur, and occasionally the head of the radius and the superior aspect of the acetabulum. Bones that are subject to greatest mechanical stress during activity are susceptible to the necrotic process.

Roentgenographic examinations were made of persons who had been treated with radium twenty to thirty years before. Patients were selected on the basis of having received the element rather than because symptoms occurred, so that slight early bone lesions could be detected.

The group included 19 mental

*A clinical investigation of the chronic effects of radium salts administered therapeutically (1915-1931), Am. J. Roentgenol. 73:1006-1037, 1955.



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Roback and Beal² found that Pro-Banthine orally was an "inhibitor of spontaneous and histamine-stimulated gastric secretion" which "resulted in marked and prolonged inhibition of the motility of the stomach, jejunum, and colon..."

Therapy with Pro-Banthine is remarkably free from reactions associated with parasympathetic inhibition. Dryness of the mouth and blurred vision are much less common with Pro-Banthine than with any other potent anticholinergic agent.

In Roback and Beal's² series "Side effects were almost entirely absent in single doses of 30 or 40 mg...."

Pro-Banthine (β -diisopropylaminoethyl xanthene-9-carboxylate methobromide, brand of propantheline bromide) is available in three dosage forms: sugar-coated tablets of 15 mg.; sugar-coated tablets of 15 mg. of Pro-Banthine with 15 mg. of phenobarbital, for use when anxiety and tension are complicating factors; ampuls of 30 mg., for more rapid effects and in instances when oral medication is impractical or impossible.

For the average patient one tablet of Pro-Banthine (15 mg.) with each meal and two tablets (30 mg.) at bed-time will be adequate. G. D. Searle & Co., Research in the Service of Medicine.

^{1.} Schwartz I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: Gastroenterology 25:416 (Nov.) 1953.

^{2.} Roback, R. A., and Beal, J. M.: Gastro-enterology 25:24 (Sept.) 1953.

hospital patients who had had weekly intravenous injections of $10~\mu g$. of a soluble salt of radium. Total dosage ranged from 70 to $450~\mu g$. Examinations were also made of 20 individuals treated with radium in amounts up to at least $800~\mu g$.; dosages were unknown in several cases. In addition, 6 watch-dial painters who worked with paint containing radium salts were studied.

Bone lesions could be recognized when the body burden was $0.4~\mu g$. or higher, with the exception of 3 individuals.

Sarcomas were seen in 4 patients

who had received radium salts orally or who were radium-dial painters. The oral and paint preparations may contain mesothorium and radiothorium.

Neoplastic lesions did not occur among patients who had received only parenteral radium which did not contain significant quantities of mesothorium or radiothorium. However, intravenous or intramuscular radium salts that are contaminated with 0.66% or less of mesothorium may produce non-neoplastic conditions.

Radium poisoning cannot be detected by hematologic studies.

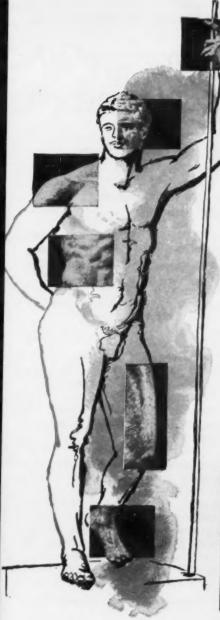
Factors in Cervical Cancer

ERNEST L. WYNDER, M.D., CORNELL UNIVERSITY, NEW YORK CITY, believes that differences in age at first coitus, in circumcision status, and in penile hygiene can explain the differences in the rates of cervical cancer among various population groups. The influence of poor penile hygiene may be explained by the theory that a carcinogen exists under the male foreskin. Therefore, universal circumcision may be a practical step in the prevention of cervical cancer.

Risk of cervical cancer is greatest in groups in which sexual intercourse is begun early with males who have poor penile hygiene. Early intercourse may lead to cancer of the cervix because of [1] greater susceptibility of young cervical tissue, [2] a more active sexual life in women who marry at an early age, or [3] a great variety of sexual partners in women who marry early and more than once. Cervical cancer is rare among virgins, and the incidence is high among prostitutes.

Pregnancy, including miscarriage and abortion, has no influence on the incidence of cervical cancer. Therefore, factors associated with pregnancy, such as cervical laceration and poor prenatal care, are probably not significant. Other negative factors include douching, hormone therapy, vaginal discharge, chronic cervicitis, onset and regularity of menses, and abstinence from intercourse after menses.

Environmental factors in cervical cancer. Brit. M. J. 4916:743-747, 1955.



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Psychosomatic Medicine

FOURTH OF A SERIES OF 5 ARTICLES

Control of Anxiety in Medical Practice

RICHARD L. JENKINS, M.D.*

Veterans Administration, Washington, D.C.

THERE is a level of anxiety which is entirely normal and which may indeed be useful, since it motivates individuals to seek solutions to their problems. There is also anxiety of greater intensity which interferes with effective functioning and even causes or contributes to illness and suffering. Many people are indeed "worried sick."

The task of the physician is to try to control, not to abolish anxiety. This task is resolved into 2 elements: [1] to control any existing morbid anxiety and [2] to help the patient organize his thinking and his life so that recurrence of runaway anxiety is unlikely.

Steps in the management of anxiety are:

1] Recognition of its presence, estimation of its degree and pervasiveness, and recognition of its causes, if possible

2] Immediate measures for its reduction, such as removal of the patient from grossly anxiety-provoking situations, reestablishment of some sense of security through the patient's confidence in the phy-

sician, and prescription of sedative drugs as indicated

3] Development of the patient's understanding of his own mental state and the reasons for his anxiety to the end of giving him a greater understanding and control of his own reaction

4] Encouragement of modification of the patient's life adjustment to prevent proneness to recurrence of runaway anxiety.

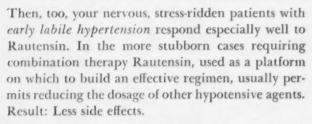
In dealing with anxiety, diagnosis and treatment are by no means separable. Diagnosis is a part of treatment, and the patient's response to treatment is a part of diagnosis. The physician should always bear in mind that the anxious patient is looking desperately for help and that he usually looks particularly to the physician by reason of the function and training of the medical man. Confidence and courage may be no less infectious than anxiety and fear but can spread from physician to patient only if the patient feels a basis for confidence.

An initial element of tremendous

^{*}This is an abridgment of Chapter 2, "Control of Anxiety in Medical Practice," of a monograph, *The Medical Significance of Anxiety* by Richard L. Jenkins, M.D., published by and available from the Biological Sciences Foundation, Ltd., 1011 New Hampshire Avenue, N.W., Washington 7, D.C.

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importance, therefore, is how the physician conducts himself with relation to the patient. Important elements in determining the response of the patient are his belief [1] in the medical knowledge of the physician and [2] in the physician's interest in him as a person, not merely as a "case." Perhaps the order of these 2 points should be reversed, for the patient typically is much more concerned about the second than about the first.

It is of the utmost importance that the physician clearly shows interest by a close, kindly, and understanding attention. This involves careful attention to what the patient is able to tell him. If the physician shows the simple human patience this requires-even when, as is often the case, some aspects of the patient's recital are essentially noncontributory so far as the organic aspects of the condition are concerned-and if the physician also has a professional confidence that his scientific learning and art will provide something of value to the patient, the initial contact may be transforming in its reassuring effect, even though such reassurance may be only temporary. A good beginning is, of course, only an initial step, but it can be of tremendous importance in facilitating therapeutic progress.

DIAGNOSIS

Physical signs of anxiety, while not wholly dependable, may indicate the degree and pervasiveness of emotion. Tense restlessness; a lined, worried face; wet palms; and chewed nails are proverbial. With severe states, the pulse may be rapid and the pupils dilated.

A careful medical examination of the patient should be undertaken initially and followed by whatever clinical and laboratory procedures are indicated. The physician should put himself in a position to speak with confidence as soon as possible.

Intelligent questions will often elicit clues to treatment. For example, a useful lead is, "Do you worry?" or, more tactfully, "Is it hard for you to relax?" The query, "Is sleep difficult?" may be followed by "Are you kept awake by thinking?" and then by discussion of the troublesome thoughts.

How much fun does the worrier get out of life? How much satisfaction? General lack of both fun and satisfaction usually indicates intense anxiety or depression.

Situations that bring on, heighten, or lessen anxiety are often revealing. For example, mental or physical reactions noted by women at bedtime may indicate fear of pregnancy, resentment of marital relations, or dread of contraceptive measures demanded by the husband but forbidden by religion. Men whose anxiety appears at bedtime may be troubled about sexual adequacy.

Does tension interfere with work or social life? Is the patient unable to meet some particular circumstances, and what is their nature? Is he constantly fatigued?

It may be found, for example, that a hypertensive patient experiences anxiety regularly in relation

(Continued on page 172)

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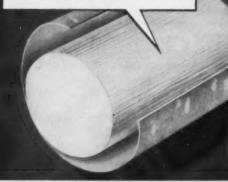
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*Youngblood, V. H.: J. Urel. 78: 926, 1953.





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to illness or danger to the health of his elderly parent. If this parent has been domineering and the patient submissive, conflicting feelings related to guilty resentment may be a particularly important symptom in the genesis of anxiety.

Merely calling attention to the importance of such feelings may only make matters worse, for such a patient usually blames himself for his resentment—if, indeed, he is able to recognize it at all. What the patient needs is help in accepting himself and his feelings. Recognition by the physician that such feelings are natural or understandable will usually help. The physician may even find it helpful to volunteer (if it is true) that under the same circumstances he thinks he would feel the same way.

The physician should be careful not to fall into the error of advising or appearing to advise that it is right for the patient to feel as he does. Usually, the patient is committed to a belief that the feeling is wrong, and the physician's attempted support may merely serve to identify the physician with the forces of evil. On the other hand, the understandability of his feelings often means much to the patient, particularly when he cannot accept those feelings as right. It reduces the feeling of aloneness.

Being ill in itself heightens apprehensiveness. Fear of cancer, venereal disease, and mental illness are common specific fears not always disclosed to the physician. Fear of indirect effects of the illness is common. The incapacitated businessman may dread financial

failure; the employee, loss of pay and of job; the wife and mother, breakup of her home or neglect of her children.

A mother's concern over the sick child may interfere with the treatment of the child. Great pains should be taken to explain the probable course of illness, expected results of therapy, possible side effects, and danger signs.

The return of confidence to a deeply harassed person after the initial sympathetic reception of his tale is prognostically favorable and facilitates therapeutic progress. Unrelieved despair or a sense of impending disaster suggests a grave terror-stricken phase, as with agitated involutional depression, and may call for confinement in a mental hospital.

Depression mixed with anxiety must be evaluated carefully because depression introduces the risk of suicide and affects management of the patient. In contrast to the fidgety, talkative, anxious person, the preponderantly sad individual is typically slowed down and finds it difficult or impossible to get through a day's work. The walk is languid, with short strides and no arm swinging; the head turns with the body as if rigidly joined. Early morning awakening, poor appetite, and sense of guilt are typical of depression. Crying spells are frequent and have special significance in men.

With agitated depression of the involutional period, anxious elements are outstanding. The condition is more severe, hazardous, and lasting than is the ordinary retard-

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ed depression, the depressed phase of manic-depressive psychosis.

With extreme anxiety with depressive components, suicidal impulses should be appraised by questioning the patient as well as the family. "When you are very anxious, what do you feel like doing?" "How are your spirits?" "Is life worth living?" If the answer is negative, "Have you ever thought of doing anything about it?" "What?"

It is neither desirable nor necessary to give false assurances to a patient. There is a strongly reassuring quality in kindly, direct, frank, yet, so far as possible, encouraging answers. Such replies usually give the patient the feeling that the physician can be trusted and believed. If ominous signs are apparent in the patient's condition, the physician will, of course, use discretion in how much is disclosed to the patient, for no virtue exists in panicking an already overanxious patient. It is generally, of course, good practice to inform the relatives in as nonalarming a manner as possible about any serious potentialities that cannot be discussed with the patient. An important result may be that the relatives will encourage continuance of the medical study until the questions are answered.

If the patient is panicky, it may be desirable to attack the problem simultaneously on both the medical and the psychologic levels, for the whole adaptive capacity of the patient—physiologic and psychologic—is interfered with when his level of anxiety is very high. When anx-

iety rises past a certain critical point, it readily "snowballs." Reducing the reactivity of the nervous system may be a necessary and important step in returning the system to normal functioning.

USE OF DRUGS

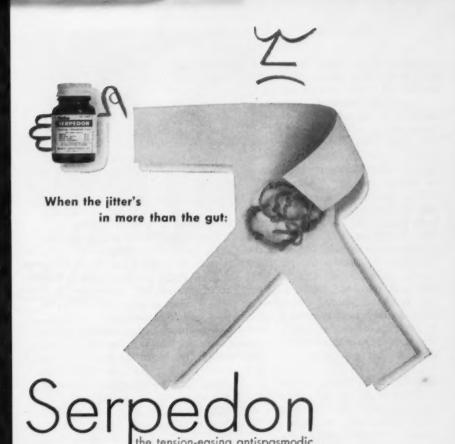
Sedatives have long been employed to provide restful sleep and to lower critical reactivity during waking hours. To avoid toxic symptoms, drugs are given under close medical supervision. Discriminating use sometimes makes hospitalization unnecessary. On the other hand, the discipline and training of a psychiatric department may effectively substitute for medication.

A practical diagnostic test is performed with 0.2 gm. of Sodium Amytal. A minute or two after an intravenous injection, symptoms due to anxiety usually disappear.

Alcohol, the most popular sedative of the laity used for the relief of anxiety, is likely to cause addiction because it is readily available and is easily abused.

Phenobarbital is excellent as a sedative, because of typical slow effect. However, terror-stricken patients may repeat doses too quickly. In the ensuing toxic fog, a potential suicide may take his life. Quickacting barbiturates are employed chiefly to ensure sleep. Continued large doses of barbiturates will cause true addiction, and sudden withdrawal may bring on convulsions or psychotic reactions.

Opiates, though unsurpassed for pain, should not be used for anxiety unless a single dose is urgently needed and less addictive agents



Serpedon* helps you treat the jittery patient with the jittery gut, not just his spasm, which is most likely a symptom of his real trouble: anxiety and tension. Serpedon is 0.1 mg. reserpine, plus three alkaloids of belladonna, equivalent to 7 minims of the tincture. Serpedon rescues the patient from his symptom-producing anxiety and tension with reserpine . . . tranquilizes him, doesn't dull him. Serpedon stops spasm...stops it quickly, gives reserpine time to exert its full, tension-easing effect. Recommended dose is one tablet t.i.d. Supplied in bottles of 100 scored tablets. *trademark

Walker Laboratories, Inc., Mount Vernon, New York

are unavailable. Safer drugs that quiet trepidation greatly reduce the amount of opiate needed for pain.

Systematic bromide therapy is effective if chlorides are limited. Bromides in milk or well diluted are given after meals to prevent gastric irritation. Risk of dermatitis or bromide intoxication should be kept in mind.

The tranquilizing compounds, chlorpromazine and Rauwolfia, have been useful, but the patient should be observed closely for side effects. Chlorpromazine has been effective for phobias, obsessions, paranoid trends, and agitation. Agitated, hostile, and paranoid senile patients are rendered more manageable. Nausea and vomiting from psychic or other factors are controlled, and tolerance for pain is increased. Large doses induce profound sleep, but the subject is readily awakened and consciousness is not clouded.

Doses of 10 mg. of chlorpromazine are given by mouth two or three times daily, or 25 mg. is injected intramuscularly once or twice a day. If, after two days, response is inadequate, the amount is gradually raised biweekly or weekly until symptoms subside or toxic signs appear. Generally, 200 to 400 mg. per day suffices, and relaxation may continue after medication is diminished or stopped. Risk of drowsiness makes driving a car hazardous until dosage and tolerance are established.

Among possible untoward reactions are fever, griplike symptoms, skin allergy, and agranulocytosis. Obstructive jaundice may result from plugging of bile canaliculi.

All patients are watched for icterus, and treatment is withheld when urinary bile is demonstrable.

Reserpine allays fears with less weakening of energy and drive than do barbiturates. Serenity and a sense of well-being are induced in many tense individuals. The psychotic patient may require 2 to 8 mg. of reserpine daily. In office practice, doses are generally less. Therapeutic effects are commonly established in a week or two.

Occasional side effects include nasal stuffiness, sleepiness, dizziness, or diarrhea. Less often, headache, bizarre dreams, and nausea occur. Untoward symptoms frequently vanish after two or more weeks of treatment.

Reserpine, and less often chlorpromazine, may cause deep, generally transient hypotension or even vascular collapse. Parenteral doses of chlorpromazine, which acts more rapidly, are advised only during bed care or at least with an hour's subsequent rest and close observation. Electroshock during therapy may, in exceptional cases, precipitate vascular collapse.

Depressed states can be intensified or created by either drug, especially reserpine, and suicidal impulses may emerge. As a rule, signs of dejection contraindicate both compounds. Each type of medication may provoke parkinsonian symptoms, which call for reduction of dosage or cessation of treatment.

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to understand what is wrong and what will be done for relief. Explanations should be clear, simple, encouraging, and matter-of-fact. The realm of alarmed uncertainty then shrinks, and what was a frightening unknown becomes a manageable problem.

The patient of limited intelligence, stereotyped thinking, and inflexible personality may best be aided through an attitude of kindly authority. A pliant though modest intellect will perhaps gain far more from new insight. Intelligence generally furthers treatment, yet keen minds will at times erect barriers against assistance and may be difficult to influence.

Severe anxiety heightens susceptibility to further anxiety and tends to become self-sustaining, or autonomous. Neither insight into primary causes nor their removal will always bring about recovery, although insight usually contributes toward improvement, and not infrequently we see spectacular improvement as a result of insight. Even when anxiety is severe, most affected patients eventually recover.

Courage to face responsibilities and uncertainties that are bound to remain must be built. As simpler tasks are met, confidence is acquired for greater difficulties. Pressing anxiety from a recent specific cause may be eliminated by a single visit, but treatment of a long-established pattern is inevitably time consuming.

Much attention is given to origins of anxiety. The patient often views his illness as punishment for some real or imagined fault.

Causative factors for a patient's anxiety may be sought in review of earlier life. The subject can be persuaded to see himself more objectively, as shaped by experience and as, in part, the product of numerous outside influences. This is of value with the overconscientious patient who is prone to blame himself. Search for the basis of morbid anxiety often discloses several intermingled factors, such as personal insecurity, lack of self-confidence, unfavorable judgment by others, and past failures. The typical background is wanting in parental warmth and acceptance. To win approval, the child had to meet rigorous standards and became preoccupied with efforts not to do wrong.

Anxious insecurity may be related to personal illness and lack of endurance or stem from parental disease, especially neurosis of the mother. Economic and social disadvantages may be contributory. If a course depended on for success in life is about to go wrong or a question once believed settled must be reopened under threat of failure, an anxiety is created or strengthened. The more confidently a former decision was made, the more unsettling are reawakened doubts.

Sudden removal of outer support, not excluding resented control, is often disturbing. Children abruptly given much wider freedom than customary and adults with increased power and responsibilities may be equally affected. Some are upset by loss of a parent or birth of a child. Alterations of environ-

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ment are disconcerting if the rate is too fast or not enough firm elements are left. In general, tolerance for change corresponds with vigor and is greatest in young adult life.

PREVENTIVE MEASURES

Treatment of anxiety is not complete until means of avoiding recurrence have been considered and suitable plans adopted. To quiet incipient perturbation is easier than to reduce established levels of anxiety.

If an original attack lasted some time or was repeated, the convalescent is asked to call his doctor whenever worry is building up or threatens to get out of hand. A trying situation can be endured with regular intervals of relief. Once a week, the harassed mother may arrange to have an afternoon out, the tense student to enjoy a social date, or the businessman to play a round of golf.

Satisfaction in life is a bulwark against nagging fears. Recreation at its best is indeed re-creation, and room should be made for fun—fun for the patient, which is not necessarily the kind that the doctor enjoys. Because most people find their pleasure chiefly outside of work, avocational possibilities are always thoroughly discussed.

Bodily states contrasting with those related to anxiety may be cultivated methodically, including muscular relaxation. A warm bath is useful in relieving emotional stress. A life pattern with several sources of strength must be developed. Varied interests and pleasant human relationships reinforce faith in self and tolerance of uncertainty.

The strain of unwilling submission to an overbearing parent or spouse is nearly always lessened by frank discussion. If the inhibited partner can express his feelings and objections openly, both mental attitude and personal relations are likely to improve. Preliminary coaching may be required, since failure may exaggerate the difficulty.

When fear is controlled as much as possible, an audit is taken of personal assets and liabilities. What are the troublesome external factors? Can they be eliminated?

In an unpredictable world, belief in changeless elements may be a guiding star. The problem of anxiety is often simplified by firm, coherent religious principles, if the original tenets are not shaken by conflicting experiences. From a strictly medical point of view, the current expansion of organized religion is good news in this country, where anxiety is notoriously prevalent.

The cost of treatment may be a source of uneasiness. A frank discussion of necessary or desirable medical expenses and the most reasonable alternatives often reduces budget worries.

When a psychiatrist is desired for diagnostic opinion or for therapy, the suggestion is made tactfully to avoid provoking the spoken or silent rejoinder, "So you think I'm crazy? Well, you're crazy!" The specialist may be described as skillful in dealing with tension, fear, and emotional strain, so that refer-

(Continued on page 184)

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OPHTHALMOLOGY

ral will not be mistaken for abandonment of a hopeless mental case.

Psychiatric consultation is indicated when anxiety is associated with:

- Strong depressive tone and suicidal preoccupation
- Increasing vagueness and incoherence
- Developing projection and persecution trends
- Threatening withdrawal
- · Approaching panic
- To a lesser degree, obsessive and compulsive features or defenses.

Hospital care may be obligatory for all but the last-named complication.

¶ DIAGNOSIS OF MYASTHENIA GRAVIS involving the extraocular muscles is facilitated by intravenous administration of edrophonium chloride (Tensilon), a quaternary ammonium compound. S. Arthur Boruchoff, M.D., and Bernard Goldberg, M.D., of the New York Eye and Ear Infirmary, New York City, report the recovery of muscular function within thirty seconds after injection of 10 mg. of the drug in a patient with bilateral ptosis which had failed to benefit from neostigmine. In normal subjects, muscle strength is not increased and fasciculations occur.

Arch. Ophth. 53:718-719, 1955.

¶ OPHTHALMIC DRUGS not adversely affected by heat should be sterilized by autoclaving; preparations which cannot withstand heat should be sterilized by Berkefeld or Seitz filtration, if possible. When chemical preservatives are used in multiple-dose solutions, C. A. Lawrence, Ph.D., of the University of California, Los Angeles, finds that chlorobutanol, phenylmercuric nitrate, and benzalkonium chloride are the most effective bacteriostatic agents. However, preparations should be dispensed in single-dose, sterile containers without added chemical preservatives.

Am. J. Ophth. 39:385-394, 1955.

¶ RETINAL BLOOD FLOW is increased by administration of Priscoline or papaverine intravenously or nitroglycerin sublingually, but nicotinic acid and sympathetic block are ineffective. Gauging activity by changes in the height of the b-wave of the electroretinogram, Jerry Hart Jacobson, M.D., and Capt. Max W. Lincoln, M.C., U.S.A.F., of the New York Eye and Ear Infirmary, New York City, find that the greatest effect occurs within fifteen minutes of injection. Apparently, the sympathetic system has little control over circulation in the normal eye..

Arch. Ophth. 52:917-922, 1954.

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*"... secondary infection with pustulation often follow scratching which is induced by the intense itching." Nelson, W. E.: Textbook of Pediatrics, ed. 5, Philadelphia, W. B. Saunders Company, 1950, p. 1516.

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Medical Forum

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Surgery with Sympathetic Uveitis*

QUESTION: Should an injured eye be removed to prevent uveitis of the contralateral orb?

Comment invited from

MAURICE W. NUGENT, M.D. WALTER H. FINK, M.D. DERRICK VAIL, M.D. GARRETT L. SULLIVAN, M.D.

▶ TO THE EDITORS: Sympathetic ophthalmia is still an important condition in the practice of ophthalmology. The recent paper by Dr. Frank C. Winter is one of the most constructive on this subject that has been presented in the past years. Dr. Winter has approached it scientifically and his summation is excellent and to the point.

I believe it should be stressed that a recently injured eye that is violently involved in the inflammatory process and possesses very little vision is better enucleated than left in the orbit as a potential excitant of sympathetic ophthalmia. Once sympathetic ophthalmia has started in the uninjured eye, it is too late to remove the injured eye. Therefore, it should be removed early, when it is obvious that the injured eye will never be of significant use to the patient. How-

ever, most of us do not wish to remove eyes that may have some useful vision when the process has quieted and healed; therefore, we are slow to enucleate eyes. This is as it should be.

Of course, the danger period is in the first two to three weeks, but it must be realized that there is some danger for the rest of the individual's life. If the injured eye remains violently inflamed after treatment, it is safer to remove it—and the earlier the better. This means that the ophthalmologist in charge of the case must be bold and courageous in advising an enucleation procedure.

Our previous thoughts and considerations on this subject are of course now tempered with the use of ACTH and hydrocortisone. It is obviously essential that a study be made and a comparison drawn between cases treated and those not treated with these hormones. I feel that would establish more firmly in our minds the exact procedure to follow. Most ophthalmologists today feel that significant benefit is obtainable through the treatment of sympathetic uveitis with these newer steroids.

The diagnosis, of course, must be carefully established; uveitis and (Continued on page 194)

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sympathetic uveitis and phaco-anaphylaxis must be differentiated. I believe many of us fall into error in establishing the exact diagnosis, which at times is not easy to do, but it is very essential that every consideration be given to arrive at the diagnosis before enucleation is advised or before ACTH or Hydrocortone is used.

In view of these obvious discrepancies in our understanding of proper procedure in sympathetic uveitis, it is felt that a definite study should be made by those men working in large clinics where sympathetic ophthalmia cases are seen in significant numbers. This type of study should be done independently by several men who, each in turn, reports his findings and recommendations on at least a dozen cases. This work should be supplemented by pathologic reports whenever such are possible, and the cases treated with the hormones should be compared with those that were not.

In summary, I feel we have much to learn yet regarding sympathetic uveitis, but now that we have these important therapeutic measures to use it would appear that an excellent evaluation could be made on this subject within the next year or two.

I would like to congratulate Dr. Winter for his fine paper. I feel that it has crystallized a good deal of our thinking and makes us feel that we are on firmer ground in our recommendations in this dreaded condition.

MAURICE W. NUGENT, M.D. Los Angeles

► TO THE EDITORS: Sympathetic uveitis is a complex subject. Although many phases of our knowledge pertaining to it are obscure, certain factors seem evident. This is particularly so in regard to the occurrence.

It is generally recognized that the condition occurs as a result of a laceration resulting from a perforating injury or a surgical procedure involving the uveal tract, such as iris inclusion or cataract extraction. However, its occurrence is so comparatively rare that such operations are indicated in spite of this possibility. Evidence indicates that it rarely develops before ten days after the injury.

Once the normal eye is involved, removal of the exciting eye does not alter the course of the condition in the sympathizing eye. Except when the exciting eye is blind or nearly so, enucleation of the exciting eye, once the process is under way in the sympathetic eye, is a valueless procedure because the exciting eye may eventually have the better vision.

The prospect for final vision in sympathetic uveitis is better today because the disease can be controlled to some extent by cortisone and ACTH. Evidence indicates that the use of these hormones should improve the final visual results over what might have been expected in the past.

The immediate use of these drugs after injury may be a factor in preventing the occurrence of sympathetic uveitis, but evidence is inconclusive as to the value of this step. It is possible that it may mere-

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¹Bargen, J. A., and Jackman, R. J., Journal Lancet, 72:11, Nov., 1952.



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ly mask the picture while the drug is in use.

The degree of injury to the area does not seem to be a factor in its development, as a small injury in the region of the ciliary body may be just as conducive to sympathetic uveitis as a large one.

The only sure way of preventing sympathetic uveitis is enucleation of the injured eye before ten days have elapsed after the injury.

In the case of a badly lacerated eye, enucleation is obviously indicated immediately. However, if the eye has a small perforation in the region of the ciliary body where it is evident that good vision will be obtained, the decision as to the procedure is difficult to make. In such minor injuries the eye may not be removed, although experience indicates that sympathetic uveitis may occur in such an eye.

WALTER H. FINK, M.D.

Minneapolis

►TO THE EDITORS: Fortunately, the dread complication of sympathetic uveitis is indeed rare, as shown by the experience in World War II. In these days of miracle drugs—including the steroids—sympathetic uveitis has lost considerable of its sting.

An eye that is hopelessly injured ought to be removed at once. An eye that is badly injured can be watched for a period of ten days, and if in that time the vision decreases and the eye becomes softer, it had best be removed. If, however, there is a prospect of some useful vision, then the eye should

not be removed. If sympathetic ophthalmia occurs in the uninjured eye, the removal of the injured eye will not do any good, in my opinion. Sometimes the injured eye ends up by having better vision than the sympathizing eye.

Each case must be carefully watched and judged on its own merits.

DERRICK VAIL, M.D.

Chicago

- ► TO THE EDITORS: The exact etiology of sympathetic uveitis remains obscure. However, some characteristic features of this disease are generally recognized.
- The condition is a potential complication of any perforating injury of an eye, particularly when there is damage to uveal tissue. Obviously, therefore, much ocular surgery comes under this category.
- The incidence is rare, the occurrence dreaded.
- The onset occurs usually not sooner than two weeks after injury and may be up to months later.
- The most effective treatment is preventive—enucleation of the injured eye within two weeks after injury. In this event, the likelihood of sympathetic uveitis is practically nil.
- Enucleation after the onset of uveitis in the fellow eye serves no useful purpose and is frequently contraindicated as the injured eye may ultimately have the better vision.
- Cortisone and ACTH have proved the most effective agents in the treatment of the disease but must

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be used for many months to control the inflammation.

The two weeks after an injury, therefore, provide a valuable safe period during which a decision should be made as to enucleation. After this time has elapsed, the possibility of sympathetic uveitis must be constantly borne in mind.

In arriving at a decision regarding enucleation, the most important consideration concerns the possibility and probability of regaining useful vision. When there is little or no hope for this, enucleation is in order.

Difficulty arises in those cases in which the prognosis for vision is poor, but the chances of regaining a natural appearance are good. It has long been generally believed that injuries which undergo delayed healing provide greater danger of sympathetic uveitis. Any eye which continues in an inflamed, irritable state at the end of the second week should be suspect; enucleation should be seriously considered unless the chances of regaining useful vision are sufficiently good to justify the risk involved. A calculated risk is occasionally justified in retaining an eve for cosmetic reasons mainly, when the injury is not extensive and shows good healing.

Every effort should be made to save an eye when there is reasonable hope of regaining useful vision. Such eyes should be watched closely for months, and, at the first sign of sympathetic uveitis, adequate cortisone or other steroid therapy should be instituted.

GARRETT L. SULLIVAN, M.D.

Boston

The Role of Simple Mastectomy*

QUESTION: When is simple mastectomy preferred to the radical procedure for carcinoma of the breast?

Comment invited from
JOHN ARMES GIUS, M.D.
JEROME A. URBAN, M.D.
BERNARD J. FICARRA, M.D.
LOUIS P. RIVER, M.D.
J. C. WEISMAN, M.D.
HARRY A. DAVIS, M.D.
BEN EISEMAN, M.D.

- ▶ TO THE EDITORS: In my opinion, simple mastectomy for operable cancer of the breast has limited usefulness. This procedure is not designed to encompass the axillary nodes which are the primary route for lymphatic metastases. For this reason, it cannot qualify as an adequate cancer operation and should be reserved for special situations. These include:
- Advanced age or physical status, when the patient is an unsuitable risk for radical mastectomy
- An ulcerating lesion of the breast with proved metastases beyond the axilla
- A circumscribed breast cancer with metastases beyond the axilla but without gross axillary involvement.

In each of the above categories, the choice of treatment will lie between x-ray therapy and simple mastectomy after biopsy diagnosis. The decision as to the mode of treatment will depend upon local findings in the breast and axilla; the

(Continued on page 202)
*Modern Medicine, July 1, 1955, p. 94.



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 Prigot, A.: Ann. New York Acad. Sc., in press.
 Milberg, M. B., and Michael, M., Jr.: Ibid.
 Pollack, H., and Halpern, S. L.: Therapeutic Nutrition, Prepared in Collaboration with the Committee on Therapeutic Nutrition, Food and Nutrition Board, National Research Council, Washington, D. C., 1952.

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MODERN MEDICINE, September 15, 1955 201

general condition of the patient, including psychologic factors; availability of facilities for adequate irradiation therapy; and the social and economic factors which pertain.

Generally, if the patient is not inoperable according to the criteria of Haagensen and Stout, properly planned and executed radical mastectomy is in order. Most patients who can tolerate simple mastectomy will also tolerate radical mastectomy. Those in poor physical condition, however, require the expenditure of sufficient time and effort to place them in optimal condition for operation. This may include restoration of cardiac compensation and correction of deficits in blood volume and nutrition. If the importance of these items is recognized during the preoperative period, the mortality from radical mastectomy will approximate that of simple mastectomy.

I agree with Drs. Benjamin F. Byrd, Jr., and Dawson B. Conerly, Jr., that selection of patients for radical mastectomy should be more rigid. Too many patients with incurable disease are being subjected to radical mastectomy. While it is not difficult to establish inoperability in those patients with extensive local disease, the same cannot be said of patients with apparently curable breast cancer and distant occult metastases. In justice to the patient, it would seem that the search for distant metastasis should be carried out vigorously as part of preoperative evaluation. If metastases are found in the lungs or skeleton, the patient can be spared an unnecessary radical operation.

Although methods currently available for identifying distant metastases leave much to be desired, the possibility that such a search may be unrewarding does not justify its omission.

The preoperative survey should include careful questioning of the patient regarding pain, especially in the region of the spine or along nerve roots. Chest films for lung and rib detail should be secured. The lumbar spine and pelvis need not be x-rayed as a routine, but the more often examination is carried out, the more often metastases in these areas will be found. Laboratory studies, such as the erythrocyte sedimentation rate and the serum alkaline phosphatase determinations, may also suggest the possibility of metastases.

Patients with cancer of the medial half of the breast should be subjected to biopsy of lymphatic nodes of the internal mammary chain in the second intercostal space. The presence of metastases in this area precludes cure by conventional radical mastectomy. A similar situation obtains when metastases are found by biopsy of the supraclavicular nodes. Under these circumstances, simple mastectomy may be justified.

JOHN ARMES GIUS, M.D. Iowa City

► TO THE EDITORS: Biopsy of the internal mammary nodes is justified as an academic investigation. Unfortunately, this incision directly into an area of involved lymphatic nodes and vessels may very

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*Bunim, J. J.: Research Activities in Rheumatic Diseases, Pub. Health Rep. 69:437, 1954.





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well set free metastatic emboli and hasten systemic extension of disease. Under this circumstance, it is probably safer to perform a radical mastectomy and not biopsy these nodes. Since the internal mammary nodes comprise a primary lymphatic drainage depot of the breast we believe that extension into them is best treated by radical mastectomy with en bloc in continuity excision of the internal mammary nodes. For determining operability, biopsy of the supraclavicular nodes is more rational, since these nodes are involved secondarily and usually together with systemic spread of disease.

There is no valid statistical basis for the recent enthusiasm for simple mastectomy as the optimum treatment for operable breast cancer. The only comparable data which avoid the pitfalls of individual selection are over-all statistics. McWhirter has reported a 42% five-year survival rate in 1.882 consecutive primary breast cancer patients treated during 1941-47 mainly by simple mastectomy and aggressive x-ray therapy. In contrast, a 49% five-year survival rate was obtained at the Memorial Hospital during 1945-46 when 1,153 consecutive primary breast cancer patients were treated mainly by radical mastectomy and x-ray therapy. A significant increment in survival rate with identical material-7%-favors radical mastectomy.

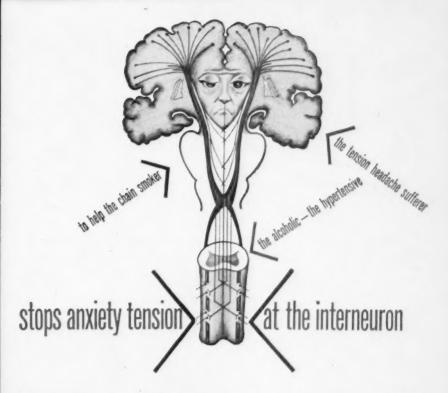
There are very few indications for simple mastectomy in the treatment of cancer of the breast. As a palliative measure, radical mastectomy is preferable since it has a lower incidence of local recurrence. Furthermore, in capable hands, it does not have an appreciable morbidity or mortality. As a therapeutic measure for primary operable breast cancer, simple mastectomy is justified only in very feeble, aged individuals who cannot tolerate more adequate surgery.

JEROME A. URBAN, M.D. New York City

- ► TO THE EDITORS: In my opinion, a decision for or against simple or radical mastectomy for carcinoma depends on several factors. These are:
 - 1] The age of the patient
 - 2] Operative risk
 - 3] Operability of the lesion
 - 41 Stage of the disease
- 5] Presence or absence of palpable metastases
- 6] Bleeding or ulceration of the breast
- 7] Biologic activity of the carcinoma

A simple mastectomy would be my choice in an elderly patient who was not a satisfactory candidate for extensive surgery. The same preference would prevail in any age group if the patient had a serious constitutional disease which would negate a long surgical procedure. In addition, a simple mastectomy would be my choice in a patient with an ulcerating or bleeding breast lesion. At this stage the patient invariably has metastases, but the procedure would be performed as a palliative one in order to make

(Continued on page 208)



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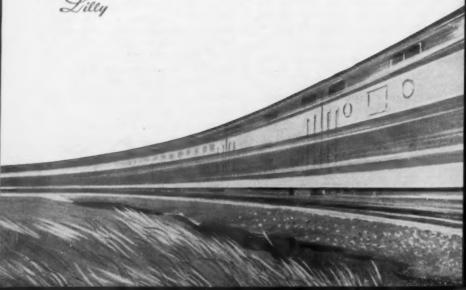
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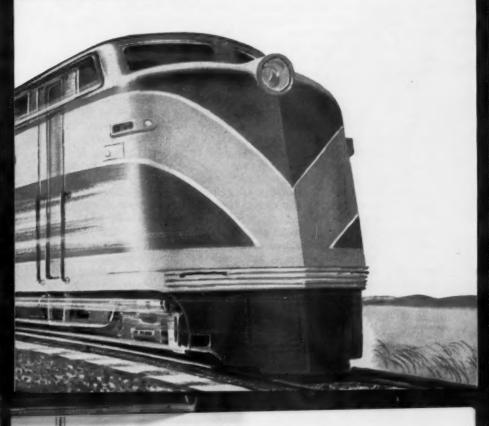
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the patient more comfortable hygienically and psychologically.

I have observed excellent surgeons perform simple mastectomies for carcinoma. According to them, their end results compare favorably with the results of other surgeons who perform only radical mastectomies.

It is understandable that an early carcinoma of the breast, well circumscribed and limited to the soft tissue could be removed in toto with a gratifying prognosis. Recently I have had 3 patients with carcinoma of one breast who requested a simple mastectomy of the normal breast at the same time that the radical mastectomy was to be performed. The patients were a nurse, a doctor's wife, and a doctor's sister. They were all intelligent and desired the extra surgery as prophylaxis against cancer in the normal breast.

As of now, it is felt by myself and those associated with me that elective surgery for breast cancer should be a radical procedure. By radical I do not mean the prolonged ad infinitum operation of Halsted, I do mean a standard classical radical mastectomy with removal of the pectoral muscles and a cleansing dissection of the axilla. I do not have sufficient faith in the extremely radical internal mammary lymphatic dissection as proposed by some authorities in this field. It is my personal feeling that when metastases have reached the internal mammary chain, the lesion is bevond the reach of the surgeon's scalpel. One must recall that the lymphatics on one side decussate and interlock with the lymphatic

channels of the opposite side. Thus, to be complete, the operative procedure would necessitate resection of the opposite corresponding lymphatics.

One must realize that, as of now, the exact biologic activity of breast cancer is not definitely known and is not properly categorized. The day may come when it will be demonstrated that some cancers have a selective metastatic affinity for certain tissues and that other cancers of the same organ will bypass one structure and enter a more distant tissue. If this should occur, the surgeon will be forced to alter his concept of surgical treatment. The proper procedure will then depend upon the exact histochemical structure and biologic activity of the primary tumor.

BERNARD J. FICARRA, M.D. Brooklyn

TO THE EDITORS: The selection of cases for simple mastectomy and the observation of generally satisfactory palliation at the Cook County Hospital are almost identical with that described by Drs. Byrd and Conerly.

We have become increasingly particular in applying the clinical categoric contraindications to curability and do at least as many simple mastectomies as we do standard radical operations. Unfortunately our follow-up is not of such a nature as to allow observations of survival comparable to those of the authors. Although we are sure that biopsies of intercostal, supraclavicular, and the highest axillary nodes

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would indicate in many more cases that only palliation could be achieved, these biopsy procedures do not seem to be practical and proved enough for general adoption.

Otherwise, the conclusions in this article seem reasonable and pertinent to the constantly recurrent problem of selection of the extent of treatment on the basis of clinical findings.

LOUIS P. RIVER, M.D.

Oak Park, Ill.

TO THE EDITORS: Simple mastectomy is preferred to the radical procedure for carcinoma of the breast when the five-year survival rate is the same or better, provided that the simple mastectomy is combined with adequately administered radiation therapy.

The role of simple mastectomy combined with radiation therapy will gradually become an accepted procedure as statistics accumulate to prove that the survival rate after radical mastectomy in similarly selected cases is not materially different. The proponents of radical mastectomy have yet to prove that surgical trauma does not open up lymphatic spaces and actually spread malignant cells when the lymph nodes are already involved by cancer.

While radical mastectomy may still be advisable for the case with a few movable nodes low in the axilla, the patient with nodes high in the axilla is very likely to have supraclavicular or internal mammary involvement and simple mastectomy is the method of choice. The relative five-year survival rate after radical mastectomy with movable masses, with or without movable axillary masses, is 41.3% according to Haagensen's figures, whereas the survival rate for a similar period including all unselected cases by the McWhirter group is 43.7%. One cannot break down into figures the decreased morbidity, lessened incidence of lymphedema of the arm, and the increased morale of the patient treated by simple mastectomy and radiation therapy.

The skin and subcutaneous tissues after simple mastectomy remain in a soft and pliable state and will tolerate higher radiation dosage.

J. C. WEISMAN, M.D. Kew Gardens, N.Y.

TO THE EDITORS: Simple mastectomy, in my opinion, is preferred to the radical operation as a palliative procedure in the poor-risk patient who is inoperable—from the viewpoint of radical mastectomybecause of advanced age, debility, or concurrent disease. It may be employed in the inoperable patient for the removal of a painful, ulcerated, or foul-smelling tumor. The inoperable patient who has responded well to irradiation may receive further benefit from a simple mastectomy. Sarcoma of the breast is generally better managed with simple than with radical mastectomy.

Much controversy has centered around the proponents of simple as opposed to radical mastectomy for the definitive treatment of carcinoma of the breast. The data presented by Drs. Byrd and Conerly do not prove that simple mastectomy is preferable to radical mastectomy in the treatment of this disease. They may be justifiably interpreted to indicate that in disease of lower biologic activity, as it is encountered in the older age groups, a simple mastectomy may provide as adequate a survival time as does radical mastectomy.

Simple mastectomy, followed by intensive irradiation, has been advocated by McWhirter of Edinburgh for the definitive treatment of this disease. His end results compare favorably with those obtained by the use of radical mastectomy. Are these results strictly comparable, however? I do not believe so. McWhirter's data are based on large numbers of patients treated under the supervision of one man who is greatly interested in the problem of cancer of the breast. Is it fair to compare his series with other series in which radical mastectomy has been carried out by many surgeons of varying degrees of experience and interest in this disease? In the McWhirter technic, furthermore, no histologic proof of sterilization of the regional lymph nodes can be presented.

At the present time, simple mastectomy has a useful place in the palliative treatment of cancer of the breast, particularly in the aged. When the disease has involved the internal mammary nodes—as shown by preliminary intercostal biopsy, which should be performed at the time of biopsy of the breast—sim-

ple mastectomy and irradiation may eventually be shown to be preferable to radical mastectomy or to the more radical Urban or Wangensteen procedures.

HARRY A. DAVIS, M.D.

Los Angeles

TO THE EDITORS: Simple mastectomy in its true meaning implies removal of all mammary tissue, leaving the pectoral muscles and overlying fascia. It is as difficult to perform in most ways as is radical mastectomy, and the two procedures should carry approximately the same low mortality rate. If a surgeon is to perform excisional therapy for mammary carcinoma, therefore, why not do radical mastectomy?

Simple mastectomy for carcinoma is never indicated if a curative procedure is contemplated, unless one is running a careful evaluative series of the McWhirter combination of simple mastectomy and radiation therapy.

As a palliative measure it is of only occasional benefit in removing a foul, ulcerative lesion. If so employed, postoperative radiation is obviously mandatory. Irradiation alone usually can attain the same benefit in making such offensive lesions less objectionable but often requires a longer period of time for maximum benefit.

Occasionally, simple mastectomy is indicated prior to the diagnosis of carcinoma but even then its indications are few.

BEN EISEMAN, M.D.

Denver



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- Bender, T. J. Jr.: at:Mtg. Med. Assoc. St. Alabama, Mabile, 1954.
- Jessup, R., Murray, R. J. and Ressi, A.: Amer. Proct. & Dig. of Treatment, 5:792, 1954.

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Conization of the Cervix*

QUESTION: Is conization effective for carcinoma of the cervix?

Comment invited from

CLAYTON T. BEECHAM, M.D.
JAMES V. MC NULTY, M.D.
PAUL A. YOUNGE, M.D.
P. K. CHAMPION, M.D.
R. W. TE LINDE, M.D.
ROBERT J. CROSSEN, M.D.

TO THE EDITORS: I would say that Dr. M. C. Hawkins, Jr., has stated the case for conization fairly and completely. As will be gathered, the operation must be done in a hospital since anesthesia is required. This is one of the chief deterring points of the procedure.

We have found it quite satisfactory—in several thousand cases—to take cervical biopsies and cauterize the cervix in the office or outpatient clinic. Most of the chronic cervical diseases may be treated in this way. The saving of hospital expense and patient time is considerable and in no way jeopardizes the end result.

I have never seen a patient develop cervical carcinoma who received regular semiannual checkups wherein prompt attention was given to the various cervical lesions and a cure effected by cautery.

Thus, I feel that the claims made for conization by Dr. Hawkins are valid, but the same result may be accomplished without hospitalization for conization.

CLAYTON T. BEECHAM, M.D. Philadelphia

*MODERN MEDICINE, June 15, 1955, p. 128.

TO THE EDITORS: I cannot conceive of any situation in which conization of the cervix would be effective. As a prophylactic measure, conization simply eliminates one squamocolumnar junction but another must be regenerated while we are lulled into a false sense of security. Furthermore, it is impractical to cone the cervices of all women in the third, fourth, and fifth decades of life. The resulting stenosis, cervical dystocia, and incompetence of the valvular mechanism of the internal os would be disastrous to the childbearing woman.

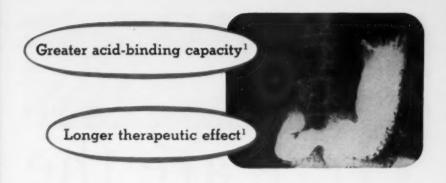
As active treatment of carcinoma of the cervix, conization is ineffective; it has been repeatedly demonstrated that carcinomas in situ of preoperative cervical biopsies were in reality invasive carcinomas in the removed cervices.

JAMES V. MC NULTY, M.D. Los Angeles

To the editors: The answer to the question of whether conization is effective for carcinoma of the cervix must be a very emphatic, unequivocal NO! The reason for the immediate answer in the negative is to emphasize that, when cervical cancer is invasive and 1 cm. in diameter or larger, the only safe treatment consists of a full course of irradiation therapy or the modern radical hysterectomy, depending, of course, upon the stage of the disease and the physician's experience.

A few patients with lesions larger than 1 cm. in diameter have

(Continued on page 218)



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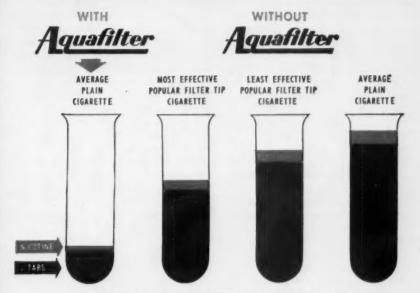
PHILADELPHIA 6, PA.

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been cured by lesser procedures, but the surgeon and the patient were just fortunate that the biologic behavior of that particular cancer was such that it was readily cured merely by local destruction or excision. This is not true of most invasive cancers of the cervix, and as yet it is impossible to anticipate the biologic behavior of invasive cervical cancer except to expect the worst and treat it radically.

During the past twenty-five years, pathologists have come to recognize malignant epithelium before it fulfills its ultimate behavior of invasion and metastasis. This stage of cervical malignancy is known as carcinoma in situ or intraepithelial carcinoma. Atypical epithelia such as anaplasia of repair, metaplasia, and parakeratosis not infrequently are confused with carcinoma in situ: all of these lesions must be studied by adequate multiple biopsies, including cervical curettage, or by very careful serial block study of a diagnostic conization specimen. If conization is elected as the diagnostic procedure, it must be performed with a sharp knife and not with an electrosurgical cutting device because the histology is distorted by electrocoagulation.

When the lesion proves to be carcinoma in situ and preservation of reproductive function is important to the patient, conization frequently is successful as definitive therapy. In such conservatively treated patients, the complete removal of the in situ cancer must be determined by histologic study

of the cone, as well as by follow-up study of the cervix after healing, Papanicolaou smears, biopsies, and endocervical curettage. At the Free Hospital for Women, we prefer multiple square-jawed punch biopsies as the diagnostic procedure and sharp conization as the treatment in selected cases of carcinoma in situ of the cervix.

If all benign inflammatory lesions of the cervix were corrected by cauterization with the actual cautery, electrocoagulation, or electroconization in women beginning in the early twenties and post partum thereafter, cancer of the cervix would cease to be an important gynecologic problem.

PAUL A. YOUNGE, M.D. Brookline, Mass.

TO THE EDITORS: Normal cervical tissue is composed of about 85% connective tissue, 15% muscle tissue, and a small amount of elastic tissue. If the cervix becomes infected, it becomes hypertrophied. This enlargement is due in part to retention cysts and in part to the connective tissue. The latter is the end result of a primary granulation tissue response. The correction of this is destruction or removal of the diseased tissue down to the healthy cervical tissue. This may be done in most cases by actual cautery, but if the hypertrophy is marked, conization is advisable. Stenosis is no problem in conization if dilatation is done at monthly intervals for approximately six months.

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normal prevents cancer has not to my knowledge been proved. However, in other parts of the body, it has been fairly conclusively shown that chronic infection or irritation predisposes to the formation of cancer. It has been shown statistically that circumcision of the male decreases incidence of cancer of the cervix by about 8 to 1. The inference is that the uncircumcised male introduces infection-bacteria or virus-to the cervix over a long period of time. This is purely conjecture but would lead one to believe that the incidence of squamous cancer of the cervix would be higher in the diseased cervix than it would be in the normal healthy cervix.

P. K. CHAMPION, M.D.

Dayton

TO THE EDITORS: Conization of the cervix should not be used as definitive treatment for carcinoma in situ. On examining the specimens removed by hysterectomy, too frequently we see extension of the carcinoma in situ beyond the point where it would have been removed by conization. However, since carcinoma in situ almost always begins at the squamocolumnar junction and since this area is always removed by conization, it is evident that the procedure removes the vulnerable area of the cervix.

Nevertheless, I cannot agree with Dr. Hawkins' indications for conization. Most cases of cervicitis, endocervicitis, and cystic cervicitis can be treated more simply and

just as effectively by the simple procedure of office cauterization. This procedure is less apt to give rise to complications and from an economic standpoint is very advantageous for the patient. In the end, the cervix is left more normal than following conization. Although Dr. Hawkins is to be congratulated in his low incidence of cervical stenosis. I have seen stenosis many times over the years after conization; often the stenosis became complete years after the conization. Also, Dr. Hawkins' own figures have demonstrated an increase in abortions after conization.

I believe that leukoplakia should be removed by excision biopsy; if carcinoma is ruled out, no treat-

ment is required.

Cervical polyps usually may be twisted off easily in the office and the base touched with a cautery. This is just as effective as conization, much simpler, and much less expensive to the patient. I see no reason for treating small stellate lacerations in the absence of cervicitis.

Conization for all cases in which a partial hysterectomy is preferred to total hysterectomy, I believe, is sound but will not be resorted to often if total hysterectomy is done as frequently as it should be.

Conization of the cervix is a procedure that looks pretty and is fun to do, but the method does have some complications which occasionally are serious and which, like all other surgical procedures, should have sound indications.

R. W. TE LINDE, M.D.

Baltimore



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Safe in any situation: Because Anusol does not narcotize, the presence of strangulation, ulceration, malignancy or prostatic disease is not concealed. Diagnosis and treatment of co-existing disorders (anal fissures, infected crypts, polyps, warts, abrasions, abscesses, etc.) are not impeded. Anusol does not produce rectal anesthesia which aggravates concurrent constipation.

night and after each bowel movement. Packaging: Boxes of 6, 12, 24 individually foil wrapped suppositories.

Anusol

Suppositories

WARNER-CHILCOTT

TO THE EDITORS: The importance of conization in the discovery of unsuspected cervical cancer was emphasized by Dr. Hawkins, but he stated that curettage was not done routinely. It is our feeling that, while the patient is under anesthesia for the conization, curettage and careful pelvic examination should always be done, and in our series we discovered 8 cervical and 8 endometrial carcinomas by following this plan. One of these patients refused treatment, but the other 15 are all alive and apparently free of disease six to seventeen years after treatment. If the conization is done rapidly and the machine setting is high enough to prevent deep coagulation, the pathologist should have no trouble in making an accurate diagnosis, even in instances of intraepithelial carcinoma.

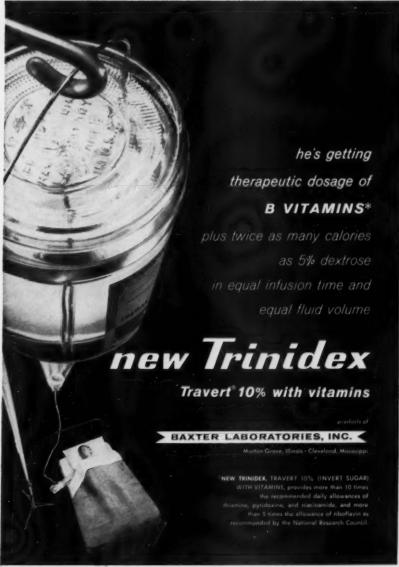
During the past twenty years, evidence collected from several sources indicates that chronic cervicitis is probably the most important predisposing factor in the development of squamous-cell cancer of the cervix. In a recent study of 1,200 cases of cervical carcinoma, Maliphant found that the risk of a 35-year-old woman developing cervical cancer is 10 times as great if she has delivered children than if she has not. He also found that the risk increases with each confinement, so that a woman who has 6 or more children is twice as apt to develop cervical carcinoma than one who has only 1 child. Gagnon surveyed the medical files of 13,000 nuns covering a twenty-year period and found no cervical carcinomas, and, as is known, cervicitis is rare in nuns. This study, as well as others, has led him to feel that cervicitis is at least a very important predisposing factor in the development of carcinoma of the cervix.

Dr. Hawkins had 25 cases of serious postoperative bleeding, 5 of which required hospitalization and transfusion. Since 1935 we have been suturing all of our cases, using an anterior and posterior Sturmdorf and, in addition, several lateral sutures. As a result we have had no cases of severe bleeding, though several have required an extra suture when the vessel at the lateral angle was missed. Coagulation of bleeders results in delayed bleeding.

ROBERT J. CROSSEN, M.D. St. Louis



"Is it too late for me to change my mind?"



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-Krantz, J. C .:

Pennsylvania M. J., 58:383 (April) 1955.

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Diagnostix

Here are diagnostic challenges presented as they confront the consultant from the first clue to the pathologic report. Diagnosis from the Clue requires unusual acumen and luck; from Part II, perspicacity; from Part III, discernment.

Case MM-295

THE CLUE

ATTENDING M.D: I was just on my way to the urology ward where a postoperative patient has become ill. The surgeon suspects a pulmonary embolus.

VISITING M.D: If you would like, I'll come along.

ATTENDING M.D: Fine. The urologist told me on the phone just now that the patient, a 75-year-old man, had a transurethral resection performed two days ago. Convalescence was smooth until this morning when the patient was awakened with severe pain in the region of the xiphoid and right lower chest anteriorly. Breathing increases the pain. That's all I know about the case.

PART II

VISITING M.D: Here we are. (The nurse hands them the chart.) Let's review what has happened thus far.

ATTENDING M.D: Let's see. He is a retired business man who has had progressive symptoms of prostatism over the past several years. He has an enlarged prostate, residual urine of 4 oz., normal blood counts, a nonprotein nitrogen of 25 mg. per cent, and



a normal preoperative electrocardiogram. A roentgenogram of the chest made last week was negative.

VISITING M.D: Was a preoperative medical examination made?

ATTENDING M.D: Yes, here is a letter from the patient's family physician. Apparently, the man has been in good condition and leading an active life. He has not been taking any medicines and has had no significant cardiorespiratory symptoms. Annual medical examinations for the last five years have shown nothing except slight systolic hypertension and progressive symptoms of prostatism. Acute retention two weeks ago led to the deci-

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Ergotamine tartrate 0.3 mg.
Bellafoline 0.1 mg.
Phenobarbital 20.0 mg.

Adult Dosage: 4 to 6 tablets daily.



sion to perform a transurethral resection.

VISITING M.D.: Nothing in the recent past to suggest a peripheral venous disorder?

ATTENDING M.D: No, and he wasn't confined to bed until entering the hospital for surgery.

VISITING M.D: Anything in the record about today's illness?

ATTENDING M.D: Yes, the resident wrote a note. He states that the operation was uneventful with removal of 25 gm. of tissue which pathologically was benign hypertrophy. A liquid diet was given the first day, and yesterday the patient took soft solids well. Last night, the nurse's notes mentioned some slight epigastric distress which was relieved by belching. The patient slept well but was awakened early this morning by steady pain in the right lower chest and xiphoid area. His temperature rose to 100° F. orally.

VISITING M.D: With those symptoms, I trust that another electrocardiogram was obtained.

ATTENDING M.D: It is being made now.

VISITING M.D: Let's examine the patient. (They enter the patient's room where the technician is removing the electrodes. Questioning confirms the resident's history.)

ATTENDING M.D: Blood pressure is 120/60—that's down. Pulse is regular at 105. Respiration is 30—notice the splinting of the right chest.

VISITING M.D: Heart tones are good and rhythm is regular. There is

a grade II systolic murmur at the apex. (To the patient) Have you been coughing?

PATIENT: No, but it hurts here when I breathe. (He places his hand on the costal margin.)

ATTENDING M.D: There is no dullness by percussion, though the right diaphragm seems high and does not move. There is no friction rub or rales.

PART III

VISITING M.D: Percussion over the liver dullness causes pain, and there is also some guarding of abdominal muscles and tenderness in the epigastrium and right upper quadrant. The liver is not palpable.

ATTENDING M.D: Bowel tones are diminished, but there are no borborygmi. Homans' sign and calf tenderness are lacking. What do you think? (They leave the

room.)

VISITING M.D: Here is the electrocardiogram. I see no change from the preoperative record. The white count is 18,500 with 90% polymorphonuclear neutrophil leukocytes. This could be pulmonary embolus or even pneumonia at the right base instead of a high diaphragm. Order roentgenograms of the chest and abdomen and include left lateral decubitus and right lateral chest views.

ATTENDING M.D: It could still be a myocardial infarct.

VISITING M.D.: Yes, but I doubt it. Let's begin antibiotics—penicillin and streptomycin. Have gastric suction started and order She came for a check-up...



When a teen-ager comes to you for any reason—such as a check-up before going to camp or beginning another school term—treat that acne, too. She may be too self-conscious to ask your advice, but her acne demands your skilled supervision. Under your guidance, she can be spared the scarring of skin and psyche which so often follows improper self-medication or no medication at all.

Remember 'Acnomel' when you treat acne. 'Acnomel'—resorcinol, sulfur, and hexachlorophene, in a special grease-free vehicle—brings rapid improvement in acne, often in a few days. Moreover, 'Acnomel' quickly lifts your patient's morale: its flesh-tinted base masks unsightly acne lesions and is virtually invisible when applied.

ACNOMEL* CREAM

(Also available: 'Acnomel' Cake)

Smith, Kline & French Laboratories, Philadelphia 1

*T.M. Reg. U.S. Pat. Off.

some intravenous glucose. We will wait for the roentgenograms. I have an idea that this man's trouble may be below the diaphragm.

ATTENDING M.D: (Later, in the x-ray department) Here are the films you requested. The right diaphragm is high. Do you see anything to suggest pneumonia or embolus?

VISITING M.D: No, but, of course, more time is needed for a pulmonary infarct to appear. There is no air under the diaphragm. Both the large and small bowel have quite a bit of gas, but evidence of bowel obstruction is lacking. Opaque gallbladder or kidney stones are not evident.

ATTENDING M.D: I'm glad you're here. I haven't any idea what is going on.

PART IV

VISITING M.D.: Several acute illnesses tend to appear in the first few days after surgery. Pulmonary embolus must always be considered. If the problem is acute postoperative arthritis, suspect gout. If the surgery is abdominal, fever and right-sided pain suggest subphrenic abscess, especially if a viscus has perforated. Of course, particularly in this patient's age group, postoperative pneumonia or atelectasis is very common. A less wellrecognized postoperative development is acute cholecystitis.

ATTENDING M.D: But this man has had no previous gallbladder symptoms.

VISITING M.D: Don't rely too much

on that. Acute cholecystitis can develop without warning.

ATTENDING M.D: But why postoperatively?

visiting M.D. Several factors may be involved. The fasting state before and after surgery may encourage stasis and overdistention or the use of opiates may cause contraction of the sphincter of Oddi. There may be other reasons, too.

ATTENDING M.D: Shall we recommend surgery?

visiting M.D.: The surgeon must decide if and when to operate. The condition may subside with gastric suction, parenteral fluids, and antibiotics. Careful observation is necessary, as the condition may progress to empyema or gangrene may occur.

ATTENDING M.D: (Two days later)
The day after we saw the patient,
a right upper quadrant mass was
found. Operation revealed acute
cholecystitis with early gangrene.
Cholecystectomy was performed,
and the patient is doing well.



"Call the doctor, Mabel . . No. 7 just had a relapse?"



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Life's Weary Moments

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a safer tranquiliz<mark>er and</mark> antihyper**tensiv**e

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R as little as 0.1 mg. per day

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a pure crystalline alkaloid of reuwoitis root first identified, purified and introduced by CIBA

C I B A SUMMIT. H. J.

25% HUSBANDS

FOUND TO HARBOR THE PARASITE

RICHOMONAL infestation is not a purely gynecological disorder.
"... the presence of trichomonads in the genito-urinary tract of men is now known to be of rather common occurrence."

Significant statistics—"The real focus has been the male generative organ," reports Karnaky in the J.A.M.A." "The incidence of infestation in the male is placed at 5 to 15 per cent." Freed reports it n 28.5 per cent. In Karnaky's study of 150 husbands of women with recurrent trichomoniasis, 25 per cent harbored the parasites.

The ubiquitous protozoan—The reported incidence would, probably, be even higher if all foci of infection (urethra, prostate, seminal vesicles, bladder, kidney, pelvis, and preputial sac) were studied in each case.

Re-infection now prevented—In view of general mildness or absence of symptoms, male trichomoniasis is rarely the subject of active therapy. Unfortunately, such infected husbands, though symptom-free, are "none the less a potential source of re-infection in wives successfully treated." The re-infected wife, in turn, re-infects the husband.

Prescription of condoms—To break the re-infection cycle, Karnaky insists that "... the husband should wear a condom at coitus for four to nine months, during which time these trichomonads will usually die out of their own accord." Others make similar recommendations.

Prescribe specifically. Win co-operation of the husband by prescribing Schmid condoms which offer special advantages.



Where there is anxiety that the condom might dull sensation, prescribe XXXX (FOUREX)® skins. Made from the cecum of the lamb, they feel like the patient's own skin, are pre-moistened and do not retard sensory effect. RAMSES,® a transparent, tissue-thin yet strong condom of natural gum rubber, costs less. SHEIK® condom, also natural gum rubber, is even more reasonable.

Any husband or wife in your practice would prefer to hand the druggist your prescription for a condom, rather than to ask for it "in public." This is another instance of diplomacy in medicine to prevent an embarrassing situation. To assure finest quality and earn appreciation for your thoughtfulness, prescribe condoms by name. Prescribe Schmid protection as long as four to nine months after the wife's infestation has cleared. The protection Schmid condoms afford is the very foundation of re-infection control.

References: 1. Bernstine, J. B., and Rakoff, A. E.: Vaginal Infections, Infestations, and Discharges, New York, The Blakiston Co., 1953, pp. 256-258. 2. Karnaky, K. J.: J.A.M.A. 155:876 (June 26) 1954. 3. Freed, L. F.: South African M. J. (March 27) 1948, as abstracted in Urol. & Cutan. Rev. 52:489 (Aug.) 1948. 4. Karnaky, K. J.: Urol. & Cutan. Rev. 42:812 (Nov.) 1938. 5. Lanceley, F., and McEntegart, M. G.: The Lancet 1:668 (April 14) 1953.

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XXXX (FOUREX), RANSES AND SHEIR ARE REGIS-TERED TRADE-MARKS OF JULIUS SCHMID, ING. to reduce

- (1) inflammation
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Trisocort*

Spraypak*



- ▼ hydrocortisone alcohol—so effective intranasally that dramatic anti-inflammatory action is achieved with an extremely low concentration, 0.02%—the reason why "Trisocort Spraypak' produces no "steroid-like" side effects.
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Available: On prescription only—in convenient ½ fl. oz. plastic squeeze bottles.

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Tr.M. Reg. U.S. Pat. Off. for hydroxyamphetamine hydrobromide, S.K.F.

Patent 2181845

Other patents applied for.

Medical Crossword

Solution on page 280

HORIZONTAL

- I. A pit
- 6. A skin disease
- 11. Pigmented membrane behind the cornea
- 12. Real
- 13. Local excitatory state (abbr.)
- 14. Pertaining to the cheek
- 16. A unit of work
- 17. Arsenic (symbol)
- 18. Nickel (symbol)
- 19. Away from (Latin)
- 21. Babylonian deity associated with the art of healing
- 22. Milk
- 23. A measure of length
- 25. Congenital absence of the uterus
- 28. Having no
- 31. Cerium
- 32. Division of time
- 33. Baldness
- 34. Primitive living cell (suffix)
- 37. Process of healing
- 38. Odor

- 10 12 13 15 16 17 18 19 21 20 23 24 22 25 26 27 28 29 30 31 32 33 34 35 37 38 39 40 41 42 44 43 45 46 47 48 49 50 51 52
- 39. Twice (suffix)
- 41. Every morning (Latin abbr.)
- 42. Chromomere
- 43. Titanium (symbol)
- 45. To annoy
- 47. Tropical ulcer
- 48. Twitching
- 49. Part of the back between the thorax and the pelvis
- 51. Concern
- 52. Boredom
- 53. Atrophy of the body

VERTICAL

- 1. Threadlike structures
- 2. Materials containing metallic constituents

- 3. Energy (Latin)
- 4. Lower than the conscious ego; Nietzsche's term
- 5. Woody tumor on a tree
- 7. Ethyl (chemical symbol)
- 8. Anger
- 9. Certain
- 10. Great (prefix)
- 14. Cutting of thin sections
- 15. Albuminoid substance
- 18. The buttocks
- 20. Inert gaseous element
- 22. Left eye (abbr.)
- 24. Abate
- 25. Anodal closing picture (abbr.)

- 26. Honey
- 27. A negative prefix
- 29. —lan's arch formed by the transverse mesocolon
- 30. Brownish color
- 35. Prefix expressing "toward"
- 36. Genus of scitamineous plants
- 39. Fluid secreted by the liver
- 40. Metallic element
- 43. Exhaustion
- 44. Covers with ice
- 46. Related
- 48. Vaccine which protects against typhoid (abbr.)
- 50. Greek letter
- 51. Cervicoaxial

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Doctor to Doctor

Think of a gag that fits the illustration. For every issue a new gag is published and the author is sent \$5. The Sept. 15 winner is

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2.5 mg. - 5 mg. (scored)

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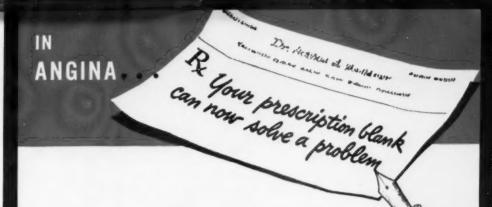
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SHARP DOHME

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Rheumatoid arthritis
Bronchial asthma
Inflammatory skin conditions

238 MODERN MEDICINE, September 15, 1955



When the glowing sense of well-being provided by alcohol is indicated therapy

and some patients are ...

TOO PREJUDICED TO USE IT, or TOO WILLING TO ABUSE IT

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ELIXOPHYLLIN

Each tablespoonful contains: 80 mg. theophylline – 3 cc. alcohol Dose: one tablespoonful between meals, two at bedtime Supply: Bottles of 16 fl. oz.

IN ANGINA PECTORIS

Alcohol—considered by many as the mood-drug of choice—is unique in its ability to "break" mounting tensions and emotional disturbances, which are often key factors in precipitating attacks.

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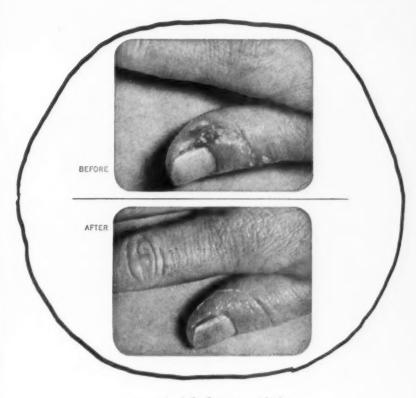


"RED-BLOODED, ISN'T HE ?"



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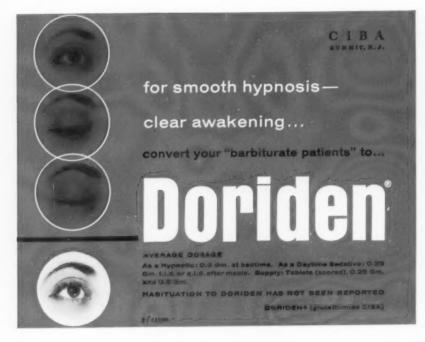
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C I B A Summit, New Jersey

2/2065M



Our Office Nurse

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No. 3

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Nephenalin

(for adults)

Nephenalin[®]

MODERN MEDICINE, September 15, 1955 241

relieve
pain,
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fever
promptly
and safely

APAMIDES

direct-acting
analgesic-antipyretic...
no toxic by-products...

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FROM ABROAD

SWITZERLAND

Cancer of the Bladder

Surgery, irradiation, and radioactive cobalt therapy appear to yield good results in the treatment of carcinomas of the bladder, according to Dr. G. Mayor of the University of Zurich.

A study of 137 patients reveals that metastases can be found in 60%. Most occur in the perivesical

lymphatic tissue.

Extensive tumors of the bladder wall are treated by transurethral resection and radioactive cobalt; total cystectomy is done only when the bladder is almost entirely involved. In such instances penetrating radiation and administration of radioactive cobalt locally provide the best palliation.

Helvet, chir. acta (Basel) 22:168-170, 1955



"Hi, Pop, I'm sick."

today...

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- With high resistance to degradation in acid media, complete solubility in alkaline
- With minimal destruction in the stomach, maximal absorption in the duodenum
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PEN·Vee·

Penicillin V, Wyeth Phenoxymethyl Penicillin *Trademark





AUSTRIA

Cancer of the Breast

The course of mammary cancer is apparently more favorably influenced by bilateral oophorectomy than by roentgen-ray castration.

Drs. Leopold Schönbauer and Erna Schmidt-Ueberreiter of the University of Vienna believe that, although radiation castration is easier to perform and does not involve an operative risk, certain definite disadvantages attend the procedure. A period of six to eight weeks is necessary to obtain full effect, and the ovaries sometimes recover hormonal function, thus nullifying treatment. Pregnancy is also possible during radiation therapy, jeopardizing mother and child.

Oophorectomy results in an immediate cessation of hormonal activity and is believed to be indicated with highly malignant disease even without evident metastases. Wien, klin, Wchnschr, (Vienna) 66:987-990,

GERMANY

Sensitivity to Dextran

Whereas sensitivity to dextran is quite rare in the general population, a large number of patients with renal hypertension are sensitive to the plasma substitute, warns Dr. J. Moeller of the University of Würzburg.

Of a group of 112 patients with renal disease, 55 had headache, lumbar pain, blood pressure changes, or urticaria after administration of a

New Patch Test Kits for PIONEER

Household and Industrial Gloves

Patch Test Kit #7 contains vials of 1 centimeter diameter discs of our neoprene Ebonettes, cotton down lined SUPER Ebonettes and knit cotton lined Bluettes Household Gloves.

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To test these gloves on your patients before you prescribe their use, order these patch test kits today.



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Acetycol provides welcome relief to the patient suffering from the stiffness and pain of arthritis and related rheumatoid disorders. With Acetycol his range of pain-free mobility is broadened and his entire outlook brightens. He is able again to resume more normal activities in work and play.

The effectiveness of Acetycol is based on synergism between aspirin and paraaminobenzoic acid. These two agents in combination achieve high salicylate blood levels on relatively low dosage. The addition of salicylated colchicine extends the effectiveness of Acetycol to cases of a gouty nature. Acetycol also contains three important vitamins often lacking in older and rheumatic patients: these are ascorbic acid, to prevent degenerative changes in connective tissues; thiamine and niacin, for carbohydrate utilization and relief of joint pain and edema. Usual dosage-1 or 2 tablets three or four times a day.

Each Acetycol tablet contains:

Each Acetycol tablet contains.		
Aspirin	325.0	mg.
Para-aminobenzoic acid	162.0	mg.
Colchicine, salicylated	0.25	mg.
Ascorbic acid		
Thiamine hydrochloride	5.0	
Niacin	15.0	mg.
Supplied: Bottles of 100 and	500.	

Acetycol

to relieve rheumatic pain

WARNER-CHILCOTT

few cubic centimeters of dextran. Almost all of the sensitive patients were also hypertensive. A group of 18 other patients with no renal involvement had no sensitivity.

In view of the significant correlation between hypertension and sensitivity, dextran apparently requires renin to become a fully active antigen.

Deutsche med. Wchnschr. (Stuttgart) 80:561-564, 1955.

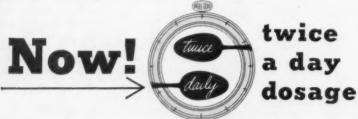
Pulmonary Artery Pressure

Pressure in the pulmonary artery can be measured accurately by transbronchial puncture, state Dr. H.-E. Euler and associates of the universities of Munich and Erlangen.

The most convenient approach

to the pulmonary artery is afforded by puncture of the anterior wall of the left main bronchus. A needle 40 mm. long and 0.6 mm. in diameter is attached to a narrow-strain gauge and introduced through a bronchoscope. After the patient is premedicated with morphine and atropine and the bronchial tree is anesthetized with a 2% Pontocaine solution, bronchoscopy is performed. The place of puncture is wiped with an antiseptic solution, and the needle is inserted until the pulmonary artery is entered. No complications were observed in a group of 100 patients studied.

Since damping is greatly reduced, pressure readings are more accurate than those obtained with cardiac catheterization. The same method



results in therapeutic sulfonamide blood levels

Lipo-Triazine*

- better patient cooperation from twice a day dosage
- better dosage control from twice a day dosage
- greater relative safety

also available Lipo-Diazine*

(brand of sulfadiazine).

Bottles of 4 and 16 oz.

"Sulfonamides in an oral fat emulsion vehicle are absorbed to higher and more prolonged blood levels in experimental animals and human subjects, as compared with absorption from an aqueous vehicle."

Stephens, L. J., and Hendrickson, W. E.: To be published.

Literature and samples on request

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The originators of liquid sulfa

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246 MODERN MEDICINE, September 15, 1955

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Your new diagnostic set—
a pleasure to own, an inspiration to use.
Completely redesigned, it has the newest in die-cast

aluminum heads, positive-locking bayonet type handle connections, brilliant flicker-proof lighting from pre-focused lamps, and positive thumb-tip control of light intensity. Weight, balance and finish—all contribute to a new luxury "feel". Your supplier will show it to you—or write: Bausch & Lomb Optical Co., Rochester 2, New York.

BAUSCH & LOMB

FROM ABROAD

can be easily adapted for angiocardiographic and cardiac output studies.

Ztschr. Kreislaufforsch. (Stuttgart) 43:692-699, 1954.

Brain Trauma in Children

Developmental and psychic disturbances are not infrequently observed after brain trauma in children under 15 years of age, report Drs. H. Lange-Cosack and E. Nevermann of the University of Berlin.

A high incidence of electroencephalographic and psychic abnormalities was noted in 41 children observed two to fifteen years after brain injury. A definite, although not constant, parallel was seen between electroencephalographic alterations and psychic disturbances. Slowing of cerebration, poor concentration and memory, and psychasthenia were common findings on psychologic tests. Irritability and fatigability were also frequently observed.

A period of about four to six years is considered adequate to make a diagnosis of irreversible changes. Special schools successfully correct behavior disorders.

Monatsschr. Kinderh. (Berlin) 103:93-94, 1955.

Terminal Cancer

Butazolidin may be employed in terminal carcinoma to ameliorate the effects of febrile and inflammatory conditions. The analgesic properties of other drugs are also po-





acute and chronic

prostatitis...

76.6% cured or improved with

Furadantin

brand of nitrofurantoin, Eaton

137 cases of prostatitis were treated with Furadantin with the following results:

	Acute prostatitis	Chronic prostatitis	Total
No. cases	20	117	137
Cured	15	30	45
Improved	4	56	60
Failed	1	31	32

(Personal communications to the Medical Department, Eaton Laboratories.)

Furadantin has a wide antibacterial range

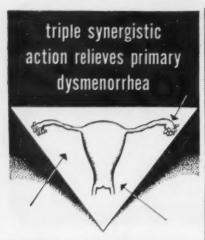
Furadantin is effective against the majority of gram-positive and gram-negative urinary tract invaders, including bacteria notorious for their resistance. Furadantin is not related to the sulfonamides, penicillin or the 'mycins.

With Furadantin there is no blood dyscrasia...no proctitis...no pruritus ani... no crystalluria...no moniliasis...no staphylococcic enteritis.

Furadantin tablets—50 and 100 mg., bottles of 25 and 100. Furadantin Oral Suspension (5 mg. per cc.)—bottle of 4 fl.oz. (118 cc.).



THE NITROFURANS -- A UNIQUE CLASS OF ANTIMICROBIALS ... PRODUCTS OF EATON RESEARCH



TRI-SYNAR

Tri-Synar—through triple syner-gism—attacks smooth muscle spasm 3 ways... musculotropic, anticholinergic and antihistaminic. Powerful parasympathetic sedation is possible with only small doses of belladonna. Side effects are decidedly restricted.

TRIASYNAR tablets

Bottles of 100.

Elixir TRIASYNAR

Each teaspoonful (5 cc.) contains: Fluidextract of Belladonna†..0.017 ml. Phenyltoloxamine

Dihydrogen Citrate......20.0 mg. Ethaverine Hydrochloride...12.5 mg. tEquivalent to 2.5 minims of tincture of belladonna U.S.P.

Bottles of 16 fl. oz.

THE ARMOUR LABORATORIES



A DIVISION OF ARMOUR AND COMPANY KANKAKEE, ILLINOIS tentiated, reports Dr. H. Schultze of Gotha.

In 30 of 32 patients, opiates could be discontinued completely or the doses substantially reduced. Weight gain and pronounced psychologic improvement were noted in several patients.

Side effects are negligible.

Deutsche med. Wchnschr. (Stuttgart) 80: 313-314, 1955.

Therapy of Retinal Detachment

Retinal detachment may be successfully treated with photocoagulation, reports Dr. G. Meyer-Schwickerath of the University of Bonn. With use of a strong source of light, such as a high-intensity arc lamp, and a specially constructed apparatus, rays can be directed to an exact spot of the retina. The large amount of light focused and absorbed in a small area creates enough heat to cause coagulation with consecutive adhesions between the retinal uvea and sclera. The adhesive chorioretinitis thus produced prevents further detachment.



"Oh, he was on a bat last night and beat up some guy."

250 MODERN MEDICINE, September 15, 1955



Only BARDEX® Balloons have these reinforcing ribs...which assure the uniform distention so necessary for proper retention and effective hemostasis.

Specify BARDEX® Foley Catheters

"The Accepted Standard of Excellence"

C. R. BARD, INC., SUMMIT, N. J.

The method is safer than coagulation by diathermy but is limited to detachments of less than 2 diopters. No untoward influence is exerted on the refracting media of the anterior and posterior chambers. The method may also be useful in treatment of glaucoma and small intraocular tumors.

von Graefes Arch. Ophth. (Berlin) 156:2-34, 1955.

FRANCE

Osteomyelitis in Children

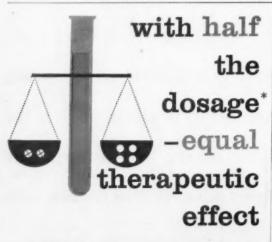
Early diagnosis and treatment of acute osteomyelitis of the hip in small children may prevent serious functional impairment.

Dr. M. Guilleminet of Lyon and associates, in a report of 19 cases

in children under 3 years of age, observe that the first symptoms are usually high fever and toxicosis, succeeded by rapidly developing local signs. The involved hip becomes swollen and painful, and the thigh is flexed and often rotated and resistant to passive movements.

Roentgenograms show arthritis with consecutive changes of the femoral head and neck. Osteolysis is frequent and results in subluxation or full dislocation of the hip. Dislocation may take place only a few days after the onset of symptoms, suggesting the extremely rapid spread of destructive inflammation.

Treatment consists of immediate immobilization with traction as well



ELKOSIN°

(SULFISOMIDINE CIBA)
SAFE, SOLUBLE, BROAD-SPECTRUM SULFONAMIDE

TABLETS 0.5 Gm. (White, double-scored) SUSPENSION IN SYRUP 0.25 Gm. per 4-ml, teaspoonful

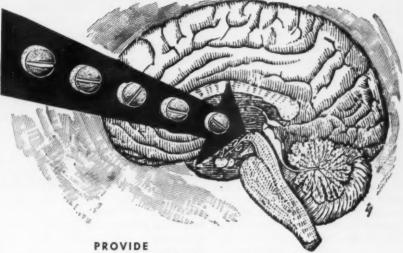
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SUMMIT, N. J.

*Elkosin maintains effective blood levels, both in urinary and systemic infections, with standard (i.e., sulfadiazine) dosage, or approximately half the dosage required with the other widely used single-soluble sulfonamide. This means extra safety, and greater convenience and economy.

2/21494

SECODRIN TABLETS



Symptomatic relief from Psychosomatic disturbances

COUNTERACT

Anxiety, abnormal dread or fear, discouragement, gloom, depression, nervousness

ALLAY

Sensation of hunger, thereby lessening tendency to overeating

CREATE

Sense of well-being without untoward after-effects

Each Secodrin tablet contains: secobarbital 30 mg. methamphetamine hydrochloride 5 mg.



PHARMACEUTICAL LABORATORIES, INC.
SOUTH HACKENSACK, NEW JERSEY

Premo Pharmaceutical Laboratories, Inc., South Hackensack, N. J.

Please send me a professional sample of
30 Secodrin tablets.

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City_

State

as intensive antibiotic therapy. If abscesses form, incision and drainage are necessary. If reconstructive surgery is required, arthroplasty with replacement of the femoral head by a prosthesis is preferred. Lyon chir. (Lyon) 50:385-406, 1955.

Therapy for Hypertension

Extensive sympathectomy consisting of removal of the lumbar and almost entire thoracic sympathetic chains provides lasting relief in the treatment of hypertension in young adults. One of the second lumbar ganglia must be spared in males, however, to avoid sexual impotence.

Drs. René-Henri Martin and Max Bonamy of Hospital Gouïn, Clichy, after 225 operations on 122 patients, stress the importance of careful preoperative evaluation of the severity of the condition caused by hypertension, especially with renal, cardiac, and cerebral involvement.

Only patients under 40 years of age who are relatively good surgical risks should be subjected to the operation.

Arch. mal. coeur (Paris) 48:240-244, 1955.

Management of Alcoholism

Correct evaluation of the success of cure of alcohol addiction can be made only if the subjects are first treated in a hospital under adequate supervision and then observed at home by efficient social service per-

(Continued on page 258)



HORLICKS

Pharmaceutical Division
RACINE, WISCONSIN

Nulacin

A recent clinical study* of 46 ambulatory non-hospital patients treated with Nulacin† and followed up to 15 months describes the value of ambulatory continuous drip therapy by this method. Total relief of symptoms was afforded to 44 of 46 patients with duodenal ulcer, gastric ulcer and hypertrophic gastritis.

The delicately flavored tablets dissolve slowly in the mouth (not to be chewed or swallowed). They are not noticeable and do not interfere with speech.

Nulacin tablets are supplied in tubes of 25 at all pharmacies. Physicians are invited to send for reprints and clinical sample.

*Steigmann, F., and Goldberg, E.: Ambulatory Continuous Drip Method in the Treatment of Peptic Ulcer, Am. J., Digest. Dis. 22:67 (Mar.) 1955.

†Mg trisilicate 3.5 gr.; Ca carbonate 2.0 gr.; Mg oxide 2.0 gr.; Mg carbonate 0.5 gr.



or the chronic fatigue patient-

Triple Protection with Donnatal Plus

Protection from emotional stress - by the mild sedation afforded by the phenobarbital in Donnatal Plus . . . minimizing cerebral hyperactivity and emotional overstimulation of parasympathetic centers.

Protection from parasympathetic hyperactivity

- by the anticholinergic action of the belladonna alkaloids in Donnatal Plus . . . relaxing gastrointestinal spasticity and helping eliminate vagal overstimulation of pancreatic islet tissue as a cause of hyperinsulinism and relative hypoglycemia.

Protection from B vitamin deficiencies

- by the high content of B complex factors in Donnatal Plus . . , helping to correct deficiencies which may contribute to impaired digestive physiology and abnormal carbohydrate metabolism.

In each Tablet or each 5 cc. teaspoonful of Elixir:

Hyoncyumine sulfate 0.1037 mg Atropine sulfate 0.0194 mg Hyaecine hydrobromide 0.0065 mg. 16.2 Phenobarbital (% gr.) 20 Riboflavia 2.0 Nicotinamide 10.0 Pantothenic acid 2.0 Pyridozine hydrochloride

DONNATAL PLUS Robins



TABLETS in bottles of 100 and 1000 CITAIR to bettles of

Ethical Pharmacouticals at Morit since 1878



itching, scaling, burning

Selsun acts quickly to relieve seborrheic dermatitis of the scalp. Itching and burning symptoms disappear with just two or three applications—scaling is controlled with just six or eight applications. And Selsun is effective in 81 to 87 per cent of all seborrheic dermatitis cases, 92 to 95 per cent of dandruff cases. Easy to use, Selsun is applied and rinsed out while washing the hair. Takes little time, no messy ointments or involved procedures. Prescribe the 4-fluidounce bottle for all your seborrheic dermatitis patients. Complete directions are on label.

SELSUN Sulfide Suspension / Selenium Sulfide, Abbott



keep | returning?



sonnel, believe Dr. P. Delore and associates of Lyon.

Institutional treatment with Antabuse followed by psychiatric and social counseling in a group of 225 alcohol addicts led to cures in 33% and failures in 43%. The remaining 24% consisted of subjects who were not available for observation, who were suspected of reverting to alcoholism, or who had resumed moderate drinking with no appreciable social or physical ill effects as a result.

Results were best with heads of large families or with husbands of cooperative wives or when drinking was induced by grief. Solitary or psychopathic persons were least likely to be cured.

Presse méd. (Paris) 63:569-571, 1955.

Tubing for Ureteroplasty

Ureteral defects in dogs may be successfully replaced by polyethylene tubing, report Drs. H.-F. Chauvin, H. Payan, and C. Jean of the University of Marseille.

Parts of the ureters of 21 dogs were resected and replaced by polyethylene tubing. In most instances, the ends of the tube were introduced into the proximal and distal ends of the cut ureter and fixed by an external ligature. No transfixing sutures were used.

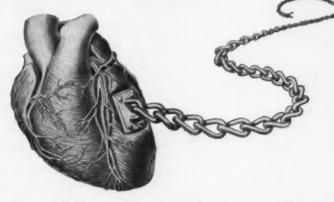
The animals were sacrificed one or two months after operation. Although some stenosis occurred at the grafted areas, no serious functional disturbances were noted. No concretions were formed inside the polyethylene catheter. A solid sheath

"Premarin" relieves
menopausal symptoms with
virtually no side effects, and
imparts a highly gratifying
"sense of well-being."

"Premarin" - Conjugated Estrogens (equine)

in your anginal patient ...

break the chain of "heart-consciousness"



Your anginal patient can be freed from his "heart-consciousness" for a wider range of activities by the daily administration of Nitralox which aids in protecting him against the bodily and emotional factors which so often precipitate anginal seizures. Nitralox generally lessens the frequency and severity of attacks, will often lower nitroglycerin requirements, increase exercise tolerance and improve the electrocardiogram.

In anginal patients with hypertension and tachycardia, Nitralox has the added advantage of reducing the blood pressure and slowing the pulse. It has no such effects in normotensives with normal heart rates.

Nitralox combines a coronary vasodilator with prolonged action (10 mg pentaerythritol tetranitrate—PETN) with a nonbarbiturate tranquillizing and bradycrotic agent (1 mg. purified mixed Rauwolfia alkaloids—the alseroxylon fraction) and is intended for long-term prophylactic therapy. While some patients experience beneficial effects within 24-48 hours, it takes about two weeks before Nitralox produces its full effect from the recommended dosage of 1-2 tablets q.i.d. before meals, and at bedtime.

NITRALOX

for long-range management of anginal attacks

Nitralox is a DORSEY preparation

Smith-Dorsey . Lincoln, Nebraska . A Division of The Wander Company

of connective tissue was formed around all ureteroplasties. In some instances, the tubing could be easily removed, leaving a newly formed tube of autogenous tissue.

J. urol. (Paris) 60:871-883, 1954.

SPAIN

Cocarboxylase Therapy

The utilization of pyruvic acid is closely related to the activity of cocarboxylase, reports Dr. L. Sans Solá of the University of Barcelona, after using the enzyme in rare rheumatic conditions. Good therapeutic results were seen after daily intravenous injections of the drug in Sjögren's syndrome, cervicobrachial neuralgia, scalenus syndrome, and sciatica.

An. med. (Barcelona) 41:177-181, 1955.

HUNGARY

Atropine Test

Administration of atropine before gastrointestinal series for detection of peptic ulcer increases the accuracy of diagnosis, according to Dr. E. Otvös of Budapest.

When administered to healthy individuals in doses of 0.5 to 1 mg., atropine will produce insignificant changes in the roentgenograms of the gastric movements. In cases of intramural lesions of the stomach and duodenum, however, atropine causes slowing of the peristalsis with greatly delayed emptying. This so-called positive atropine test was seen in 89% of 185 patients studied.

Fortschr. Geb. Röntgenstrahlen (Stuttgart) 81:749-757, 1954.



For continuous, mild Cardiotonic and Diuretic Therapy

- · for myocardial stimulation
- · to diminish dyspnea
- · to reduce edema

Prescribe THEOCALCIN — Start with 2 or 3 tablets 3 times a day and reduce the dose as improvement is obtained. Eventually the patient may be kept comfortable on a small maintenance dose of 1 or 2 tablets a day, several times a week.

Theocalcin®, a product of E. Bithuber, Inc.

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ORANGE NEW JERSEY



Gastric Hyperacidity: etiology

People being people, environmental factors contributory to gastric hyperacidity are hard to remove, even when their role is clearly defined. But, the physician has a sure, simple—even pleasant—way of relieving the acid distress caused by:

- · dietary indiscretion
- · nervous tension
- · emotional stress
- · food intolerances
- excessive smoking
- alcoholic beverages

Gelusil promptly and effectively controls the excessive gastric acidity of "heartburn" and chronic indigestion. And it affords equally rapid relief in peptic ulcer. Sustained action is assured by combining magnesium trisilicate with the specially prepared aluminum hydroxide gel. Free from constipution: Gelusil's aluminum hydroxide component is specially prepared: the concentration of aluminum ions is accordingly low; hence the formation of astringent—and constiputing—aluminum chloride is minimal.

Free from acid rebound: Unlike soluble alkalies, Gelusil does not over-neutralize or alkalinize. It maintains the gastric pH in a mildly acid range—that of maximum physiologic functioning.

Dosage—2 tablets or 2 teaspoonfuls two hours after eating or when symptoms are pronounced. Each tablet or teaspoonful provides: $7\frac{1}{2}$ gr. magnesium trisilicate and 4 gr. aluminum hydroxide gel.

Available—Gelusil Tablets in packages of 50, 100, 1000 and 5000. Gelusil Liquid in bottles of 6 and 12 fluidounces.

Gelusil°

Antacid - Adsorbent

WARNER-CHILCOTT



Surely it is best to coagulate, desiccate or fulgurate the easiest way. That is what you would do using the National Electricator. It's compact, self-contained and without complications. For example, the instrument has but one handle with built-in button switch. This you can manipulate almost as you would a pen.

With the Electricator there are just four steps: (1) set one controller knob for mono-polar or bi-polar use, (2) insert electrode into handle, (3) set intensity with second controller knob . . . (4) sfort operation by depressing the finger-tip switch. Current is 'off' the instant the controlling finger is lifted.

All of this means . . . simplicity, convenience, time-saving. And, certainly, good clinical results. If you are about to buy, remember too that the Electricator also offers you a cost-saving advantage.



NATIONAL ELECTRIC INSTRUMENT CO., INC., ELMHURST 73. N. Y.

BASIC SCIENCE

Briefs

Glover's Cancer Organism

A highly pleomorphic organism with properties of a bacterial carcinogen has been observed by Dr. Thomas J. Glover and associates and later by Dr. George A. Clark and colleagues of the Presbyterian Hospital, Newark. In addition to a filtrable phase, the life cycle includes coccus, round body, bacillus, and spore sac types. Pure cultures were obtained from various human neoplasms, primary or metastatic, and inoculation produced malignant growths in guinea pigs and rats. The microorganism was sometimes destroyed by antiserum from cancerous animals.

Poliomyelitis Pathogenesis

Tonsillar tissue and the Pever's patches of the ileum appear to be the primary sites of viral multiplication in monkeys infected orally with a poliomyelitis virus. Virus reaches the blood stream by way of lymphatic pathways and structures adjacent to the sources of proliferation, finds Dr. David Bodian of Johns Hopkins University, Baltimore. Invasion of the central nervous system by the virus apparently takes place by the hematogenous route. Antibody response appears to eradicate the viremia but develops too late to destroy virus already implanted in the central nervous system.

Science 122:105-108, 1955.



A Beech-Nut agricultural expert inspects squash grown under contract for Beech-Nut Strained and Junior Foods.

Beech-Nut Control starts in the field to safeguard Baby's Food

Baby Foods are more than a business...they are a cause to which Beech-Nut is dedicated.

The Beech-Nut system of quality control starts in the fields and orchards with inspections made by our agricultural experts during growing and at harvest.

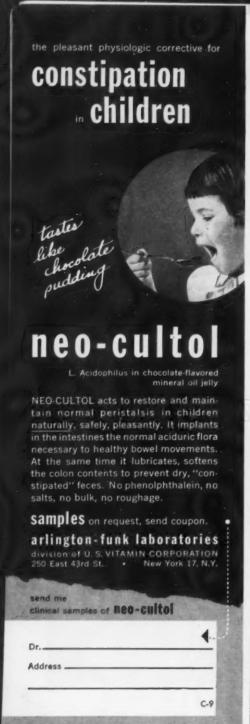


Beech-Nut has pioneered in protecting babies against toxic residues from insecticides. It has spent hundreds of thousands of dollars in research and food testing to safeguard babies.

In the Beech-Nut plant our staff of food chemists assures Baby the fine flavors and abundant nutrients he needs for happy mealtimes and healthy growth.

We give you our pledge that no pains are spared to make Beech-Nut Foods the very best that can be offered to the babies under your care.

You are cordially invited to visit the Beech-Nut Baby Food Plant at Canajoharie, N. Y.



Protective Hypothermia

Differential hypothermia appears to protect dogs against the anoxic effects of ischemic shock induced by occlusion of the thoracic aorta. Dr. William M. Parkins and associates of the University of Pennsylvania, Philadelphia, report that rapid direct cooling of the viscera with iced saline solution to a duodenal temperature of 10 to 20° C. enabled 5 of 6 dogs to survive a two-hour occlusion period, and only 1 was paralyzed. In contrast, occlusion of the aorta for thirty minutes caused paralysis or death of over half of the normothermic animals. Generalized hypothermia reduces incidence of paralysis but does not significantly reduce mortality.

Surgery 38:38-47, 1955.

Electrolyte Imbalance

Primary muscle diseases may be associated with diminution of exchangeable potassium. In a study reported by Dr. William H. Blahd and associates of the University of California at Los Angeles, measurements of total exchangeable sodium and potassium by the isotope dilution method revealed abnormally low levels of potassium in patients with muscular dystrophy or myotonia dystrophica. Correlation was apparent between levels of exchangeable potassium, creatinine excretion, and physical disability in most patients with dystrophy but not in individuals with myotonia. Intracellular sodium appeared to be within normal values although extracellular levels were slightly depressed.

Neurology 5:201-207, 1955.

short REPORTS

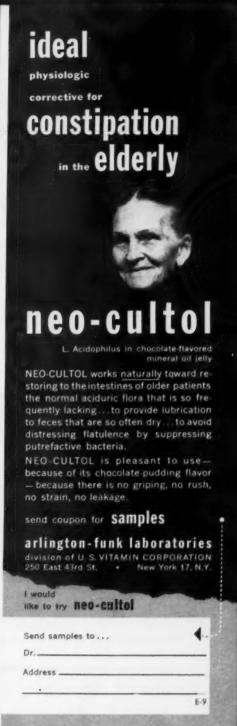
Coagulation Inhibitor

Dextran appears to interfere with the clotting process both in vivo and in vitro by reducing thromboplastin formation and decreasing prothrombin utilization. Infusions of 500 to 2,000 cc. of dextran prolong the clotting time without altering plasma prothrombin or factors V and VII, finds Dr. Ulf Jacobaeus of the Karolinska Sjukhuset, Stockholm. Tests indicate that the inhibitory effect is due to reduced platelet activity.

Acta med. scandinav. 151:505-507, 1955.

Radiation Leukemogenesis

Irradiation therapy of ankylosing spondylitis appears to be correlated with an increased incidence of leukemia. The observed deaths from leukemia in a series of 9,364 patients treated with x-rays from 1940 to 1954 were at least 5 times and possibly 10 times the expected number, with a higher incidence among patients who received multiple treatments, report Drs. W. M. Court Brown and John D. Abbatt of the Postgraduate Medical School of London. Although the patients with ankylosing spondylitis may be unusually susceptible to the development of leukemia or initial symptoms of leukemia may be misdiagnosed as ankylosing spondylitis, radiation is the probable cause of a significant portion of the increase. Lancet 268:1283-1285, 1955.



SHORT REPORTS

Therapy of Ovarian Tumors

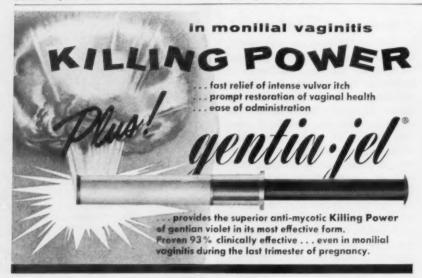
Intraperitoneal injections of radioactive colloidal gold may prevent reaccumulation of ascites and prolong the life of patients with ovarian cancer, Drs. J. Stanley Cohen and David M. Sklaroff of the Albert Einstein Medical Center in Philadelphia suggest that intraperitoneal Au198 should be given in conjunction with surgery and radiation therapy regardless of the tumor size or completeness of excision. The isotope inhibited reaccumulation of ascites for five to sixteen months in 9 of 10 patients treated. Paracentesis of ascitic fluid or pneumoperitoneum of nonascitic individuals precedes radiogold administration.

Obst. & Gynec. 6:68-74, 1955.

Prediction of Abortion

Decreased urinary levels of chorionic gonadotrophin, which may indicate inevitable termination of pregnancy, are demonstrated by a bioassay technic. Injection of urine into the common toad, Buto americanus, produces a quantitative response in spermatozoa excretion into the cloacal fluid within four hours, explain Drs. Edward H. Hon and John McL. Morris of Yale University, New Haven, Conn. Titers of less than 3,000 I. U. of the hormone per twenty-four hours from fifty to ninety days after the first day of the last menstrual period usually indicate impending abortion. Concentration of urine prevents false-negative results.

Surg., Gynec. & Obst. 101:59-62, 1955.



Westwood Pharmaceuticals

Division of Foster-Milburn Co.

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To produce an increased flow of natural, whole bile

GALLOGEN®

(diethanolamine salt of the mono-d-camphoric ester of p-tolymethyl-carbinol)

A true choleretic

- ... acts directly on the hepatic cells
- ... stimulates the flow of whole bile
- ... a laxative with a natural action
- ... a long record of clinical safety
- ... better visualization in cholecystography



Indications:

Functional disturbances of the liver
Diseases of the biliary tract
Cholecystitis and cholelithiasis
Postcholecystectomy syndrome
Reversible diseases of the liver parenchyma
Prior to cholecystography

Average dose:

One 75 mg. tablet t.i.d. until the desired increase in bile secretion is attained. Maintenance dosage, 1 or 2 tablets daily.

Send for literature and clinical supply

The S. E. Massengill Company

Bristol, Tennessee

New York Kansas City San Francisco

Inhibition of Edema

Parenteral trypsin may prevent the development of edema induced in rats by several phlogistic agents. Doses and dosage schedules must be varied for different edematigenous substances, explain Dr. J. M. Beiler and associates of Philadelphia. Larger quantities of trypsin are required to inhibit generalized edema than are necessary for merely local edematous reactions.

Proc. Soc. Exper. Biol. & Med. 89:274-276, 1955.

Control of Pulmonary Edema

Silicone aerosols rapidly and effectively clear the respiratory passage of foam associated with induced

pulmonary edema in rabbits and rats. XEC 151 or XEC 215 promptly relieves respiratory distress and prevents death in rabbits injected intravenously with toxic doses of epinephrine, observe Drs. Mark Nickerson and Charles F. Curry of the University of Michigan, Ann Arbor. Death from pulmonary edema induced by inhalation of chlorine is also prevented. Severe dyspnea and cyanosis is relieved within two to three minutes after treatment begins. Autopsy results indicate that the silicone preparations protect by reducing the foaming tendency of proteinaceous pulmonary transudates rather than by preventing accumulation of fluid. J. Pharmacol, & Exper. Therap. 114:138-147.



Meprobamate anti-anxiety (2-methyl-2-n-propyl-1,3-propanedial dicarbamete)

factor

the

Appropriate to an age of mental and emotional stress. **EQUANIL** has demonstrated remarkable properties for promoting equanimity and release from tension. without mental clouding. EQUANIL is a pharmacologically unique anti-anxiety agent with muscle-relaxing features. Acting specifically on the central nervous system. it has a primary place in the management of patients with anxiety neuroses, tension states, and associated conditions.1,2 In clinical trials, patients respond with ". . . lessening of tension, reduced irritability and restlessness, more restful sleep, and generalized muscle relaxation." It is a valuable adjunct to psychotherapy. Clinical use is not limited by significant side-effects. toxic manifestations, or withdrawal phenomena.1.2 Supplied: Tablets, 400 mg., bottles of 48.

Selling, L.S.: J.A.M.A. 187:1594 (April 30) 1955.
 Borrus, J.C.: J.A.M.A. 187:1596 (April 30) 1955.

*Trademark

Supervolt Radiation Damage

Injury to the gastrointestinal tract may be caused by 1,000 kv. irradiation of testicular tumors. Although sensitivity to supervoltage irradiation varies for each individual, the highest safe doses appear to be 4,000 r for the antrum of the stomach, 4,000 to 4,500 r for the small intestine, 4,500 r for the large intestine, and 5,000 r for the biliary tree and liver, reports Dr. Irving B. Brick of Georgetown University, Washington, D.C. Symptoms of stomach injury will usually appear within a three-month period after treatment is discontinued; small intestine or colon damage may be asymptomatic for years after radiation therapy.

Arch. Int. Med. 96:26-31, 1955.

Hormone for Neuroses

Diandrone may alter the behavior patterns and mental attitudes of persons with schizothymic or immature temperaments. Patients become less shy and show more initiative, decisiveness, and aggressive heterosexual tendencies after treatment with the hormone, report Drs. E. B. Strauss and W. A. H. Stevenson of St. Bartholomew's Hospital, London. Definite introversive or extroversive characteristics are elicited. Daily dosage, initially not more than 5 mg., is gradually increased according to the patient's response. Overdosage may cause restless activity, euphoria, and overaggressive-

J. Neurol., Neurosurg. & Psychiat. 18:137-144, 1955.

PEDIATRIC PROBLEM-SOLVER

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SPRAY-DRIED MODIFIED COW'S MILK

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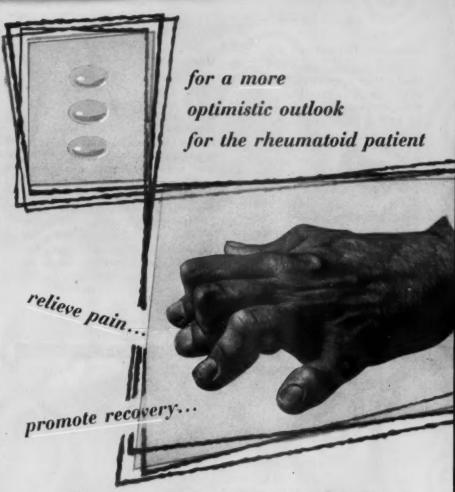
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270 MODERN MEDICINE, September 15, 1955



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SHORT REPORTS

Industrial Dermatoses

A course in occupational skin problems will be given by the University of Cincinnati and the United States Public Health Service Oct. 10 to 14, 1955. Cancer, allergic reactions, occupational dermatoses, and medicolegal problems will be included. For admission, early application should be made to the Secretary, Institute of Industrial Health, Kettering Laboratory, Eden and Bethesda Avenues, Cincinnati 19.

Relapse of Endocarditis

Recurrence of bacterial endocarditis appears to be caused by insufficient penicillin therapy rather than by development of penicillin-resistant strains of Streptococcus. Dr. Morton Hamburger and Judith Carleton of the University of Cincinnati and Cincinnati General Hospital find that the in vitro bactericidal action of penicillin was the same against strains of Str. viridans recovered from successfully treated patients and from patients who relapsed. Density of the bacterial population apparently determines sterilization time. Penicillin concentration should probably be maintained within the vegetation until all streptococci are dead. The prolongation of treatment is apparently more beneficial than an increase in the blood level of the penicillin above the lowest bactericidal concentration.

J. Lab. & Clin. Med. 46:41-47, 1955.



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- · not irritating
- unlikely to give rise to secondary
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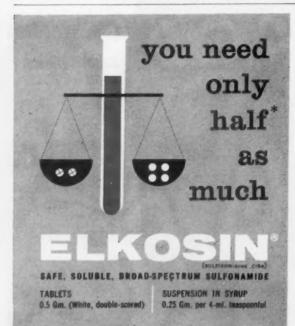


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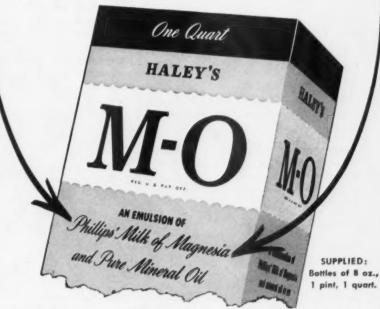


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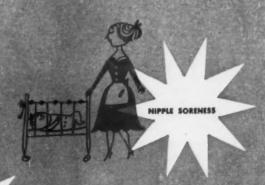
Mycostatin inhibits Coccidioides immitis in vitro and significantly depresses the infection in mice. When therapy is begun within four days after infection, the incidence of mortality is reduced and pulmonary lesions diminished, report Dr. Lee E. Gordon and associates of the University of California, Berkeley. Therapy is less beneficial if delayed beyond the eighth day of infection and does not prevent extensive visceral lesions.

Am. Rev. Tuberc. 72:64-70, 1955.

Antispastic Corticosteroids

Cortisone or hydrocortisone may ease painful joints and muscle spasticity in the paralyzed extremities of patients with old or recent cerebral infarction. The corticosteroids facilitate patient response to physical therapy, report Dr. R. F. Sheely and associates of the Annie Warner Hospital, Gettysburg, Pa. After three to four days of treatment, edema and pain are diminished, muscle groups become more pliable, and patient morale is improved. J.A.M.A. 158:803-806, 1955.





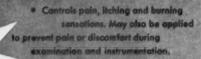


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Improved Antihistamine

A recently synthesized histamine antagonist, Vibazine, may provide prolonged relief of allergic disorders. The agent was satisfactory in 80% of 59 patients treated, reports Dr. G. Everett Gaillard of White Plains, N.Y. The drug is well tolerated by most patients, and a single 25- to 50-mg. dose usually affords relief for eight to twenty-four hours.

J. Allergy 26:373-376, 1955.

Ultrasonic Lithotresis

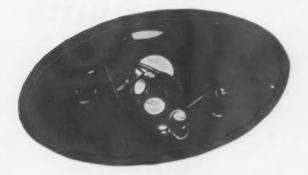
A specially designed device utilizes ultrasonic vibrations to fragment and bore through stones in the urinary tract. Drs. Harold Lamport of

Yale University, New Haven, Conn., and Herbert F. Newman of Gouverneur Hospital, New York City, describe a lithotresor which transmits ultrasound through 4 monel ribbons enclosed in a catheter with a tubular drill tip. Traction on the catheter straightens the ureter and diminishes angulation between stone and drill. Pulsation of the ultrasound prevents excessive heat production. Trials in human cadavers and in dogs indicate that the ultrasonic lithotresor may extend the zone in which manipulative removal of urinary calculi is preferred to operation. Also, stones that are larger than calculi formerly removed by mechanical means may be extracted.

Yale J. Biol. & Med. 27:395-431, 1955.



another New use of 'Thorazine'



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calms the apprehensive and anxious patient facilitates induction and intubation potentiates analgesics and anesthetics controls nausea, vomiting, hiccups and emergence excitement

a valuable adjuvant in surgical procedures

'Thorazine' Hydrochloride is available in 10 mg., 25 mg., 50 mg. and 100 mg. tablets; 25 mg. (1 cc.) and 50 mg. (2 cc.) ampuls; and syrup (10 mg./5 cc.).

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*T.M. Reg. U.S. Pat. Off. for S.K.F.'s brand of chlorpromazine.

Renal Effects of Vaccine

Poliomyelitis vaccine derived from cultures of monkey kidney tissue apparently produces no nephrotoxic or sensitizing effects in children. Drs. Franklin A. Neva and Jonas E. Salk of the University of Pittsburgh report that, in 14 patients, serial Addis counts, urinalyses, and excretion of phenolsulfonphthalein showed no changes correlated with repeated injections of the vaccine. Urine volume and specific gravity are not altered.

J. Lab. & Clin. Med. 46:21-27, 1955.

Amino Acid Hypoglycemia

Insulin secretion may be stimulated by a rise in blood amino acids. Dr. Sherman M. Mellinkoff of the University of California at Los Angeles and associates report that 250 cc. of 10% amino acid solution injected in forty-five minutes significantly lowered blood sugar in 15 persons with normal glucose metabolism. The same effect was observed after 10 subjects drank the solution.

Solution to Crossword

F	20	3 V	4 E	A		§X		4 Z	⁷ €	81	9 5	10 _M
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Rx Information

Bentyl

Bentyl affords direct (musculotropic) and indirect (neurotropic) spasmolytic action. Bentyl provides complete and comfortable relief in smooth muscle spasm; particularly in functional G.I. disorders, in irritable colon, pylorospasm, biliary tract dysfunction and spastic constipation.

Composition:

Each capsule or teaspoonful (5 cc.) contains 10 mg. of Bentyl (dicyclomine hydrochloride).

Bentyl with Phenobarbital adds 15 mg. of phenobarbital to the preceding formula,

Bentyl Repeat Action with Phenobarbital Tablets contain 10 mg. of Bentyl and 15 mg. of phenobarbital in the outer coating, and 10 mg. of Bentyl in the enteric-coated core.

Dosage:

Adults—2 capsules or 2 teaspoonfuls of syrup, t.i.d. before or after meals. If necessary repeat at bedtime.

Bentyl Repeat Action with Phenobarbital Tablets — 1 or 2 tablets at bedtime, or every eight hours as needed.

In Infant Colic — ½ to 1 teaspoonful, ten to fifteen minutes before each feeding.

Supplied:

Bentyl-In bottles of 100 and 500 blue capsules, and as Bentyl Syrup.

Bentyl with Phenobarbital-In bottles of 100 and 500 blue-and-white capsules, and Bentyl Syrup.

Bentyl Repeat Action with Phenobarbital Tablets-bottles of 100 and 500.





THE WM. S. MERRELL COMPANY New York - CINCINNATI - St. Thomas, Ontario in nervous gut

fast relief of spasm pain with Bentyl

without side effects such as blurred vision and dry mouth

The second reference man area emerical in treatment of nervous gut. Bentyl is of particular value in relief of smooth muscle apasm in functional gastrointestinal disorders, irritable colon, pylorospasm, biliary tract dysfunction and spastic constipation.

In pediatric practice Bentyl Syrup "has been extremely helpful in relieving symptoms associated with infantile colic, regurgitation and unclassified functional disorders..."

For same, expective, past aguser of nervous gut prescribe Bentyl, 2 caps. t.i.d.

1. Chemberlein, 0, 7.5 Gestreent, 17:224-5, 1931. 2, Hemorey, B., and Brance, D. G.: South, M. J. 45:11:99, 1962. 3, Policie, 5, F.: Policied, Med. 11:123, 1962.



Another exclusive product of original Merrell research

Ovarian Response to Steroid

Overdosage of methylandrostenediol induces characteristic ovarian changes in albino rats. Dr. Hans Selve of the University of Montreal finds that healthy or adrenalectomized animals given large amounts of the steroid develop venous hyperemia of the ovarian stroma, theca nests, and corpora lutea. Microscopic examination of the corpora lutea reveals numerous large lipid-filled foam cells and infiltration by elements resembling monocytes, lymphocytes, or polymorphonuclear cells. Similar ovarian changes are not noted when overdoses of other. closely related steroids are administered.

J. Obst. & Gynaec. Brit. Emp. 62:364-366, 1955.

Changed Blood Group

Human red blood cells may be transformed from one Lewis blood group to another. Change occurs when red cells and plasma of different groups are mixed in the body after transfusion or in vitro, report Drs. Joan S. Sneath of Lister Institute, London, and P. H. A. Sneath of the National Institute for Medical Research, London, Samples obtained from a Le-b positive patient after a transfusion of Le-a positive blood showed that donor cells had become Le-a and -b positive, though each person was originally free of the other's type. Antigens in the blood serum are probably absorbed by the red cells to cause the transformation.

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PREDNISOLONE, SCHERING (metacortandralone)

in rheumatoid arthritis

Culture of Poliomyelitis

Human amniotic cells can be grown in mass tissue cultures to support the propagation of poliomyelitis virus. The placental tissue is less expensive than monkey kidneys and readily available, explain Dr. Elsa M. Zitcer and associates of the University of California, Berkeley, The membranes from 1 placenta provide about the same quantity of tissue as kidneys from 1 monkey and a similar virus harvest. Poliomyelitis virus type I (Mahoney), type II (MEF-1), and type III (Saukett) readily infect the nonorganic placental cells. Membranes are generally prepared within five hours of delivery but may be stored longer.

Science 122:30, 1955.

Therapy of Yeast Vaginitis

Prompt and permanent remission of moniliasis usually occurs after therapy with Acrizane chloride. Complete cure was obtained in 73% and improvement in 18% of 38 patients treated, report Drs. Charles F. Moll, Jr., and C. Gordon Johnson of the Browne-McHardy Clinic and Tulane University, New Orleans. Nightly insertions of the cream, followed by a douche upon arising, are continued through at least one menstrual cycle. Persistent or recurring vaginitis may be satisfactorily treated with combined gentian violet and Acrizane chloride therapy. Treatment during pregnancy is effective and without hazard.

J. Louisiana M. Soc. 107:272-276, 1955.



Children enjoy taking delicious liquid Sulfa-Zem. Ideal also for those who have difficulty swallowing tablets. The multiple formula offers greatest potency against the greatest number of infections. Sulfa-Zem maintains high blood levels and excellent tissue distribution. Use of only a fractional dosage of 4 different sulfas absolutely minimizes undesirable side effects.

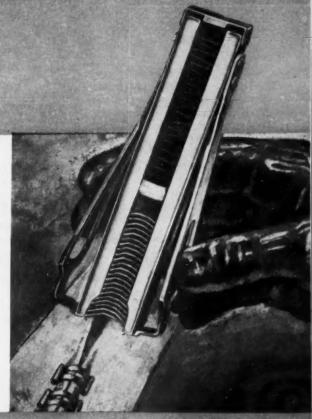
Each teaspoonful (5cc.) contains:

Sulfadiazine .										21/2	gr. (0.15 Gm.)
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16 ez. and 3 oz. bottles.



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SHORT REPORTS

Digestive Aid

Carbonated water may relieve gastric retention and subsequent gastric hyperacidity. The carbonated drink diminishes total acid secretion by hastening gastric evacuation rather than by direct influence on the gastric mucosa, find Drs. Leon A. Greenberg and John McC. Turner of Yale University, New Haven. The effect is greatest during the first fifteen minutes after ingestion. New England J. Med. 253:105-106, 1955.

Autoerythrocyte Sensitivity

An unusual tissue reaction to extravasated blood may be caused by autosensitization to factors in the red cell stroma. The response is

characterized by painful ecchymoses followed by progressive erythema and edema, report Drs. Frank H. Gardner and Louis K. Diamond of Harvard University, Boston. Spontaneous remission may occur.

Blood 10:675-690, 1955.

Ultrasound for Keloids

Hyperplastic scar formations may be softened and flattened and attendant pruritus relieved by ultrasonic treatment. Dr. John H. Kuitert of the Brooke Army Hospital, Fort Sam Houston, Tex., and associates report that a fractionated dose schedule of ultrasound therapy benefited 2 Negro patients. Am. J. Phys. Med. 34:408-412, 1955.



tykes don't "take on" when they take

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2 to 4 drops do the work of spoonfuls of syrup

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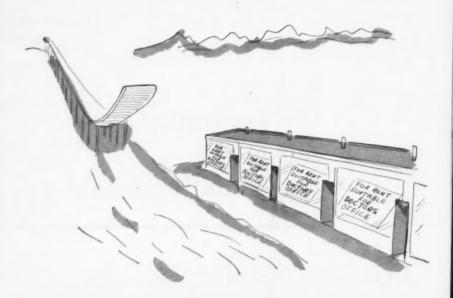
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288 MODERN MEDICINE, September 15, 1955



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relieves pain; reduces stiffness and swelling; increases mobility

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in many cases permanent improvement without further medication

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SHORT REPORTS

Respirometry in Infants

Resistance strain gauges may be utilized for accurate measurement of neonatal respiration. The apparatus, consisting of two strain gauges wrapped in latex, lessens discomfort and restraint, report Dr. Peter A. Stewart of Emory University, Georgia, and associates. The respirometer is taped to the subject and transmits the respiration movements to a recorder. Body movements are also recorded by the instrument.

J. Lab. & Clin. Med. 46:120-127, 1955.

Congestive Failure Reaction

Significant differences in heart rates in healthy individuals and in patients with congestive heart failure are observed after the Valsalva maneuver. Blowing a mercury column to 40 mm. Hg and maintaining the level for about ten seconds cause decreases in arterial pulse pressure followed by rises in diastolic pressure in healthy individuals, explains Dr. E. P. Sharpey-Schafer of London University. In contrast, pulse pressures after the Valsalva maneuver remain constant or increase in patients with congestive heart disease. Effects may be observed by feeling the pulse. Brit. M. J. 4915:693-695, 1955.

Books Received

THE DIABETIC'S COOKBOOK by Clarice B. Strachan. The Medical Arts Publishing Foundation, Houston, 1955. \$6.50

Select the level of protection the baby needs

DECA-VI-SOL

Nutritionally Significant Vitamins INCLUDING VITAMINS BIZ AND BO

Deca-Vi-Sol is highly stable . . . refrigeration not required . . . potency assured . . . readily accepted . . . exceptionally pleasant flavor . . . no unpleasant aftertaste . . . full dosage assured ... can be dropped directly into the baby's mouth.

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Correspondence

(Continued from page 32)

After roentgenography became available, I found that the acidity associated with benign ulcers of the stomach was rarely typical of anything. I found also that an early cancer of the stomach could be associated with a normal acidity or occasionally a hyperacidity.

As Dr. Hitchcock says, the result of a gastric analysis can somewhat strengthen many a tentative diagnosis, but that is about all it can do. One cannot use it completely to reassure an elderly man with a short history of gastric pain, and one cannot use it as the sole indication for an operation on the stomach.

Let us be practical. Today, a good roentgenologist usually satisfies us as to the nature of a gastric or duodenal lesion; he usually is right. He usually is right when he says the stomach is normal. In those few cases in which he is in doubt, the gastroscopist may also remain in doubt. In these few really puzzling cases, does a gastric analysis settle the question? I believe that in case of doubt as to a gastric lesion, it is better to remove it.

Some ask, but when do you order a gastric analysis? I do this when I see a woman with early gray hair, fatigue, some numbness and tingling in her legs, and fairly normal blood. A dry stomach strengthens my hunch that she has primary anemia.

Each 0.6 cc.	Chamics	Mound	(Selling)	91816	Tin C.	In a lines
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POLY-VI-SOL 6 Essential Vitamins	6	0.8	1	50	1000	5000
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Helping convolescents to want to eat. Anorexia and negative nitrogen balance often follow surgery and serious illness. KNOX Gelatine as a concentrated protein drink helps maintain nitrogen balance. And as a palatable vehicle for many foods, KNOX Gelatine brightens bland diets, giving an interest to jaded appetites. Directions for KNOX drink in every package. Chas. B. Knox Gelatine Co., Inc., Johnstown, N. Y.

I used to order a gastric analysis in all cases of unexplained chronic diarrhea, but finally I found it simpler to give for a few days with each meal ½ tsp., well diluted, of dilute hydrochloric acid. In those very rare cases of diarrhea due to achlorhydria, the patient became well over night.

I agree entirely that it is well for an elderly person to know that he has achlorhydria because then he will know that his danger of getting a gastric cancer is much greater than that of others with a normal acidity. But I do not depend on this; I advise all of my older patients to have a roentgenogram of their stomachs made every year. Even with my high gastric acidity, I have this done every year. I do not rely on my high acidity to protect me.

Years ago a friend of mine, a professor of medicine, was a bit miffed at me for telling his interns that I had very little use for gastric analysis. I said, "Wait a minute; keep reminding them that I exhorted them to spend the time they could save in the laboratory on taking a longer and more adequate history and then learning to interpret it well."

To show what I mean, dozens of times my assistant has confidently diagnosed an ulcer because of hyperacidity and roentgenographic report of a deformed duodenum. If in taking the history he had asked the patient one more question he would not have made a blunder. When I asked the patient when he had had hunger pain with food relief, he said, "Oh, that was thirty years ago when I was young. I haven't had it since!"

WALTER C. ALVAREZ, M.D.



Obedrin

and the 60-10-70 Basic Diet

Correct medication is important in initiating control that leads to development of good eating habits, essential in maintaining normal weight.^{1,2,5}

Obedrin contains:

- Methamphetamine for its anorexigenic and moodlifting effects.
- Pentobarbital as a corrective for any excitation that might occur.
- Vitamins B₁ and B₂ plus niacin for diet supplementation.
- Ascorbic acid to aid in the mobilization of tissue fluids.

Obedrin contains no artificial bulk, so the hazards of impaction are avoided. The 60-10-70 Basic Diet provides for a balanced food intake, with sufficient protein and roughage.

Formula:

Semoxydrine HCl (Methamphetamine HCl) 5 mg.; Pentobarbital 20 mg.; Ascorbic acid 100 mg.; Thiamine HCl 0.5 mg.; Riboflavin 1 mg.; Niacin 5 mg.

1. Eisfelder, H. W.: Am. Pract. & Dig. Treat., 5:778 (Oct.) 1954.

2. Sebrell, W. H., Jr.: J. A.M.A., 152:42 (May) 1953. 3. Sherman, R. J., M.D.: Medical Times, 82:107 (Feb.) 1954.

Write for 60-10-70 Diet pads, Weight Charts, and samples of Obedrin. THE S. E. MASSENGILL COMPANY Bristol, Tennessee

INDIVIDUALIZE TREATMENT OF HYPERTENSION

SITES OF ACTION

SERPABIL

APRESOLINE

SERPASIL® (reserpine CIBA)
SERPASIL® APRESOLINE® adrochloride (reserpine and hydrelazine in drochloride CIBA)
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For initial therapy—in all cases:

SERPASIL, a pure crystalline alkaloid of

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SERPASIL-APRESOLINE, a combination in the more complicated cases involving both

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In more retractory cases requiring further individualization of dosage:

APRESOLINE acts controlly and peripherolly for a marked antihypertensive effect. Increases renal plasma flow-produces vaso-Allatation-inhibits presser substances.

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Serpass Tablets, 0.1 mg., 0.22 mg. and 1.0 mg.

Parenteral Solution (for neuropsychiatric use only),

2.5 mg. per ml., in S-ml. ampula.

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Pablete, each containing 0.2 mg. of Serpasil and 60 mg. of Aprecoline.

Tablets, 10 mg., 25 mg., 50 mg. and 100 mg.

I В А

AUMMIT, M. J.

LATE REPORTS from Medical Centers

- * CANADIAN NATIONAL RESEARCH COUNCIL'S MARITIME REGIONAL LABORATORY, Halifax, Nova Scotia—Anticlotting substance can be synthesized from material in kelp. The compound is active for the requisite time, is nontoxic in large doses, and is relatively inexpensive.
- * NATIONAL HEART INSTITUTE, Bethesda, Md.—A metabolite of phenylbutazone, G-27202, is now being made synthetically for use in treatment for gout and rheumatoid arthritis. Dr. Bernard B. Brodie and associates report that the chemical appeared to be effective in preliminary tests and that no side effects developed.
- * VINCENT MEMORIAL AND MASSACHUSETTS GENERAL HOSPITALS, Boston—Specific antibodies against cancer develop in about 1 of 4 patients, believe Drs. John and Ruth Graham. After much or all of the tumor is excised in some patients, activity of the antibodies increases considerably. A specific antigenic factor is being sought.
- * INSTITUTUM DIVI THOMAE FOUNDATION, Cincinnati—Penicillin-resistant strains of Staphylo-coccus aureus lose virulence when treated with an extract of beef brain, and the host becomes immune for at least six months, report Dr. Alfred J. Berger and associates. Mortality of infected mice was reduced from 80% to less than 1%. The active concentrate, which resembles a peptide, is prophylactic as well as therapeutic.

- * ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH, New York City—Multiplication of influenza virus is entirely stopped in cultures by a benzimidazole derivative which does not harm the infected cells. Although no such compound has proved useful in human infection, Dr. Igor Tamm believes that chemicals may be discovered soon for the control of colds, poliomyelitis, and other viral diseases.
- * UNIVERSITY OF MINNESOTA, Minneapolis—A potent vasopressor agent, metaraminol (Aramine), has prolonged effect in oral, intravenous, intramuscular, or subcutaneous doses. Cerebral, coronary, and renal circulation improve, and injections cause no local tissue injury. After trial on 61 patients and 31 volunteers, Drs. Max H. Weil and Wesley W. Spink recommend that the drug be used especially for shock due to overwhelming infection.
- * UNIVERSITY OF COLORADO, Denver—Prematurity, which occurs in 7 to 10% of all births, may be predicted early in pregnancy and perhaps avoided by administration of hormones. Dr. E. Stewart Taylor and associates conclude, from observations every two weeks from the twentieth week of gestation to delivery, that sex hormone deficiency and abnormal uterine activity are the etiologic factors in prematurity.
- * UNIVERSITY OF WISCONSIN, Madison—Thyroxine is converted by the body into tri—iodothyronine. The latter acts on mitochondrial enzyme systems to lower the efficiency of intermediate carbo—hydrate metabolism yet increase the total energy available, report Dr. Henry Lardy and associates. In vitro, the hormone lengthens life of mitochondria carrying on oxidative processes. In the body, vigor of muscles and other tissue perhaps is maintained.



two tablespoonfuls in day's formula—or in water for breast fed babies -- produce marked change in stool. Send for samples.

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Speculation

"I felt like a million last night, but this morning I feel like two cents," a hospitalized patient told me.

"I guess you lost a fortune," I replied.-L.L.B.

Off the Track

"Do you understand the circulatory

system?" I asked a patient.
"Sure," he replied, "Blood going away from the heart is arterial, and blood going to the heart is venereal." -H.K.



"Wait for me . . . I won't be but a minute."

Facts on perineal hygiene for your women patients

Told in new booklet, written by a noted gynecologist, published by The B. F. Goodrich Company.

A SCIENTIFIC article on perineal hygiene is now being packed with every B. F. Goodrich gravity-flow syringe. The information in it is the type rarely published except in medical journals.

Purpose of distributing the booklet is to assist busy physicians in the dissemination of basic principles of perineal care. It's the belief of the author of the article that "because of the busy practices physicians have developed since World War II, not more than 1 of 1,000 women, visiting their physicians with a female complaint, ever learn these fundamentals."

The author, a specialist in obstetrics and gynecology on the staff of a leading American hospital, is nationally known to physicians as author of many articles printed in Modern Medicine.

Instructions are practical, easy to understand. Yet as the article warns, ". . . are not meant to replace a visit to your physician," but to give the general information you would want your patients to have before giving specific instructions.

Proper douching. At some time in almost every woman's life, it becomes necessary to douche, either from choice, or upon the advice of a physician. One part of the article tells how to douche and explains why, where to do it, what position to take, exactly how to operate a syringe, what solution to use when the physician has not advised a certain medication.

The type of syringe. "By preference," says the author, "the douche container should be a rubber bag of good quality and the 2-quart size. It should be equipped with an ample length of rubber tubing and, for shutting off the flow of water, there should be a metal clasp on the tubing several inches above the douche tip or nozzle."

All B. F. Goodrich gravity-flow syringes meet these specifications. They come in three styles: the wide, flat fountain syringe that hangs from a hook and is open at the top; the folding syringe that comes in a little waterproof case for carrying in a traveling bag, and the combination syringe, made of a hot-water bottle hanging upside down with syringe fixtures below.

A copy of this informative article on feminine hygiene is being mailed to you. After reading it, we feel sure you will approve of everything it says, subject, of course, to your specific advice in special cases.

All a woman has to do to get the booklet is ask at her drug store for a B. F. Goodrich gravity-flow syringe.

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Do It Yourself

"How much do you charge to pull a tooth?" asked a man.

"Three dollars," I said.
"If I gave you a dollar, would you loosen it a little bit?" he retorted.

Modern Trend

I saw the following sign while traveling through the Southwest: "FOR-TUNES TOLD: \$1; PSYCHOANALYSIS: 75¢ EXTRA."—S.L.



Bringers of Blessings

During a discussion of birds, I said, "The dove, the bringer of peace, is my favorite."

"I prefer the stork, the bringer of tax exemptions," my friend replied.-L.L.B.

Come-On

A patient said she had seen an advertisement for, "A valuable book including information every young girl should know before she marries, with full instructions and illustrations." She sent for the volume and received a cook book.-L.J.

MAY WE SUGGEST:

When DIARRHEA proves

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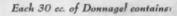
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Donnagel is building an extraordinary record of clinical success, even in stubborn cases, whether organic, functional or "emotional".

Its unique formula comprehensively embraces
the gastrointestinal adsorbents and detoxicants
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superior antacid action of dihydroxy aluminum
aminoacetate... in a highly palatable suspension.



Hyoscyamine Sulfate	0.1037	mg.
Atropine Sulfate	0.0194	mg.
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Phenobarbital (1/4 gr.)	16.2	mg.
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denced by the voluminous literature and multitude of treatment suggested and recommended by capable clinicians. Review this literature... and numerous are the therapeutic agents, many of very recent vintage, for treating vaginitis and cervicitis as well as to prepare the vagina for minor and major surgical procedures. It is true that careful screening assures you that your patient will not be subjected to chemicals that do more harm than good.

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 Weinberg, Arthur and Werner, W.E.F.: Bonadoxin, a new effective oral therapy for hyperemesis gravidarum. Am. Pract. and Dig. of Treatment. In press. 2. Personal communication. 3. Berenson, F.: Bonadoxin: oral therapy for nauses and vomiting of pregnancy. In press.



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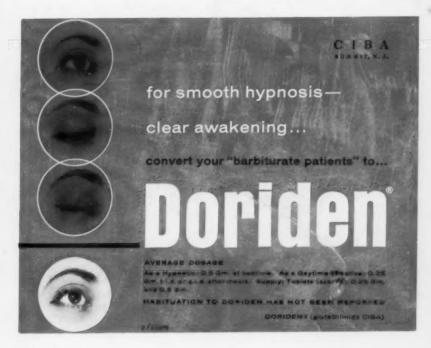


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